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# **New Generation Cooperatives:**

## **Case Studies**

### *Expanded 2001*



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### *Expanded 2001*

Edited by

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## Contents

<i>Section</i>	<i>Page Number</i>
New Generation Cooperatives and the Future of Agriculture: An Introduction	
<i>Jennifer Waner</i> .....	1
Table 1. NGC Practice: The Role of the Facilitator .....	2
Table 2. NGC Practice: The Importance of a Network of Support .....	3
Table 3. New Generation Cooperatives: Ten Difficulties Most Often Encountered .....	5
Table 4. Percentage of the NGC/LLC: Start-up Capital by Source .....	11
Table 5. Reasons Stimulating the Establishment of the NGC/LLC .....	13
Table 6. Obstacles to NGC/LLC Formation or Operation .....	14
Table 7. Factors Contributing to the Success of the NGC/LLC Effort .....	15
New Generation Cooperatives: A Short History of the Idea and the Enterprise	
<i>Igor Kotov</i> .....	19
Golden Oval	
<i>Patricia Buschette</i> .....	33
Going Against the Grain: The Story of the Mountain View Harvest Cooperative	
<i>David Carter</i> .....	43
Case Study of Southwest Iowa Soy Cooperative	
<i>Norman Walzer and Mary Holmes</i> .....	55
Table 1. Financial Structure .....	62
Table 2. U.S. Soybean Products: Value and Crush Margin per Bushel, 1950-1998 .....	63
Figure 1. Value of Soybeans and Products per Bushel .....	64
Figure 2. Margin Received by Farmers per Bushel .....	64
Golden Triangle Energy Cooperative, Inc. Ethanol Plant	
<i>Rodney Fink</i> .....	69
Table 1. Job Creation Impact from Ethanol Plant .....	75
Table 2. Estimated Values of a Livestock Operation .....	76
Table 3. Estimated Tax Revenues as a Result of an Ethanol Plant .....	76
Table 4. Specifications and Assumptions .....	78
Table 5. Operations Data .....	78
Table 6. Summary Statistics .....	79

The Role of Value-Added Cooperatives in Rural Economic Development: The Case of Heartland Organic Marketing Cooperative	
<i>Chris Merrett</i> .....	83
Table 1. Prices for Organic Versus Conventional Soybeans, May 1998 (\$/bushel) .....	85
Table 2. Income Statement for Heartland Organic Marketing Cooperative, 1995-1999 .....	91
Home Grown Wisconsin: The Story of a New Producer Cooperative	
<i>Greg Lawless</i> .....	95
Figure 1. Why Don't You Buy More Locally Grown Food Products? .....	96
Figure 2. How Likely Are You To Buy More Local Food . . . ? .....	97
Northern Vineyards Winery	
<i>Lee Egerstrom</i> .....	109
Table 1. U.S. Wine Consumption, 1993-1998 .....	114
Table 2. Characteristics of U.S. Small Farms Differ Markedly from Large Farms .....	118
Table 3. Selected Characteristics of Minority and Women Farm Operators .....	119
Hard Choices: The Birth and Death of Ranchers' Choice Cooperative	
<i>David Carter</i> .....	121
Table 1. Product Mix for Cooperative .....	124
U.S. Premium Beef	
<i>Mary Holz-Clause</i> .....	133
Figure 1. Beef, Pork, and Poultry Per Capita Consumption .....	133
Table 1. USPB Return on Investment .....	141
Figure 2. FNB Slaughter Market Share .....	142
Appendix A. U.S. Premium Beef Cattle Settlement Grid .....	148
Appendix B. USPB Settlement Sheet .....	149
South Dakota Soybean Processors	
<i>Rodney J. Fink</i> .....	151
Table 1. Characteristics of Three Soy Processing Plants .....	154
Table 2. Output Fractions from a Bushel of Soybeans from Alternative Processing Plants .....	154
Table 3. Average CBOT Soybean Crush Margins .....	155
Table 4. Change in Volume Processed .....	160
Table 5. Changes in Earning Structure .....	160
Table 6. SDSP Profit Distribution and Utilization .....	161
Table 7. Estimated Economic Activity Generated by SDSP .....	163
Table 8. Estimated Economic Activity As a result of SDSP .....	163

Iowa Turkey Growers Cooperative and West Liberty Foods	
<i>Mary Swalla Holmes and Daniel Curry</i> .....	167
Table 1. Turkeys: Number Raised 1998-1999 .....	168
Figure 1. Organizational Chart .....	170
Figure 2. Estimated Net Returns for Whole Turkey at Wholesale .....	171
Table 2. 1998 Per Capita Consumption in Pounds .....	173
Figure 3. Percent of Value-Added Products Delivered to Customers .....	174
Table 3. Time Line .....	177
Sunrise Energy Cooperative	
<i>Rodney J. Fink</i> .....	179
Table 1. Cash Flows from Financing Activities .....	186
Table 2. Cash Flow Summary .....	188
21st Century Alliance: Building Value-Added Agribusiness	
<i>Roger Brown</i> .....	193
Table 1. Farms and Principal Occupation .....	194
Table 2. Organizations Created by the 21 <sup>st</sup> Century Alliance .....	196
Figure 1. Organization Chart .....	199
Figure 2. Commercialization Process .....	201
About the Authors .....	207



## **New Generation Cooperatives and the Future of Agriculture: An Introduction**

*by Jennifer Waner*

The past 50 years have brought major changes in agriculture. Agricultural producers in the United States and around the world have faced greater competition as the capacity to produce and the supply of commodities has increased. In a sense, agriculture has been undergoing an “industrialization” process that has been defined as “the application of modern industrial manufacturing, production, procurement, distribution, and coordination concepts to the food and industrial product chain” (Boehlje 1996, 30).

The industrialization of agriculture has transformed a nation of relatively small diversified family farms into fewer specialized highly technical corporate and private operations. Over the long term, such enterprises may threaten many of the remaining traditional farms because of an absolute size advantage. Farm producers no longer engage in a subsistence type food production system; instead, they must operate in a global food system. Markets are product-driven, and production is increasingly capital dependent.

By operating individually, many farmers are simply unable to expand operations to the scale necessary for involvement in processing. This move requires too much capital, expertise, and time; however, by pooling resources, as in a cooperative venture, even small producers can reach the necessary size and output levels to vertically integrate and enter the processing arena. Cooperatives have worked well in some areas because they allow farm producers to retain ownership and control of assets while achieving economic and political power via membership (Stefanson and Fulton 1997).

Low commodity prices, recent changes in government policy such as the 1996 Freedom to Farm Act, and declining rural income and employment indicate that agricultural producers may have to revise their farming operations in order to survive. In fact, conditions such as these have resulted in the formation of numerous successful New Generation Cooperatives (NGCs) since the mid-1970s.

The following case studies examine specific NGCs and consider several questions. Why do some co-ops succeed while others do not get off the starting line? Theories have been advanced but without clear-cut answers. Because of their recent history, not much research exists on co-ops. One fact is certain, however. Creating an NGC can be financially rewarding but is far from a guarantee of survival in an ever-changing market structure.

### **What Is a New Generation Cooperative?**

The main focal point of an NGC is value-added processing. Earlier co-op ventures centered on commodity marketing, basically acting as a clearinghouse for the members’ products (Stefanson, Fulton, and Harris 1995). NGCs differ markedly from these traditional co-ops in that they have a restricted or closed membership, and members have specified delivery rights based upon the number of shares held. A democratic form of organization with one member/one vote

policies and a board of directors elected by members from the membership is the norm. Earnings are distributed among members on the basis of shares (Cropp 1996).

The price and delivery requirement per share is essentially established by the capital required for financing the development of a processing facility and the capacity of the planned facility (Stefanson et al. 1995). While members are usually allowed to purchase varying amounts of stock, the members' investments constitute a legally binding agreement to deliver the predetermined quantity of the commodity. To allow for community involvement and support, many NGCs sell preferred stock. The holders of this stock do not have voting rights.

Some of these NGCs require only a small amount of start-up capital; however, a majority require millions of dollars to be raised before construction can begin. Depending on the specific NGC, the investment and producer requirements can differ substantially.

## Cooperative Development

Within the United States, Minnesota and North Dakota have led the nation in developing NGCs. The successes achieved in these states have ignited a wave of NGC development across the Midwest. The question facing potential co-op members and development agents now is whether this model will work in other areas. Since no one has managed to define a universal plan for NGC development that is common to all existing NGCs, we must look to common critical factors as guides to developing these organizations.

Initially, one or more farmers in an area must decide that there is a significant problem facing the area, and must form a consensus among a group of producers. The group then seeks the assistance of a facilitator or specialist whose task is to assist them in defining the problem, assessing resources available, exploring possible options, and narrowing the focus on the key opportunities to alleviate the problem (see **Table 1**).

**Table 1. NGC Practice: The Role of the Facilitator**

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The appropriate facilitator or coordinator is a key element.
The facilitator must . . .
<ul style="list-style-type: none"> <li>• know enough about economic and business development to encourage the establishment of sustainable cooperative enterprises.</li> <li>• have the organizational skills to bring diverse personalities together and create solidarity and cohesion.</li> <li>• be enthusiastic about the cooperative solutions to problems.</li> <li>• allow the co-op to form and make decisions on its own. The facilitator cannot do the job for the members.</li> </ul>

---

*Source:* Stefanson et al. 1995, 19.

It is absolutely essential, as noted in the Rancher's Choice Cooperative case study, that the group work together as a cohesive unit. While reaching a consensus on important issues can be difficult, internal stresses can divert the group from realizing its potential.

According to Stefanson et al. (1995), “Motivated, determined producers are the most important element in the success of New Generation Cooperatives” (14). Producer-members must spend an immense amount of time working together to develop an NGC. Regardless of individual differences or past disputes, members must band together to develop a unified front.

The specific core group of members is most important, and it is the nucleus of the development process. It is this group that must work with lenders, arrange for feasibility studies, develop a business plan, and recruit prospective members. With a strongly motivated central core, the forming co-op can entice the collaboration and dedication of not only other farmers, but also economic development and perhaps governmental agencies (Stefanson et al. 1995) (see **Table 2**).

**Table 2. NGC Practice: The Importance of a Network of Support**

- 
- Creates the environment within which development can occur
  - Coordinates development efforts to avoid duplication
  - Provides a variety of resources and expertise to serve the varying information and service needs of producer groups
  - Creates an atmosphere of enthusiasm that is contagious
  - Acts as a network linking producers, resources, funding, changemakers, government, and other cooperative projects
- 

*Source:* Stefanson et al. 1995, 13.

Critical tools in developing an NGC include a feasibility study and a business plan. A thoroughly conducted feasibility study can point out potential weaknesses in the proposed cooperative production or processing operation. It is much better to spend the necessary funds and time to plan and investigate the potential operation than to rush into the operating stages only to experience major unanticipated drawbacks.

After the project has been determined feasible, a definitive business plan can help prospective members understand precisely what they will be buying into by joining the co-op. It can also help in obtaining industry and association contributions. While feasibility studies represent a substantial upfront expense, such work can also result in major savings in the long run.

After a business plan has been created, the equity drive is the next major component in forming an NGC. Without adequate start-up capital, the NGC cannot be successful in starting, and this is often a major deficiency of NGCs. The initial contribution by members is a measure of their commitment to the project. An NGC typically tries to sell enough shares to provide the necessary inputs for processing. Financial institutions generally want 40-60 percent of the start-up capital to be investor equity, depending on the lender and the nature of the project. The logic behind the financial institutions' requirements is simple. The greater the investment that members of the NGC have in a project, the more committed they tend to be to the project's success. The specific amount of investor equity required is likely to be greater if there is currently no

established market for the product, if risk elements involved have never been dealt with before, or if the product is extremely high-tech (Thyfault 1996).

While investing in an NGC may seem too risky for some producers, a well-placed investment can bring many financial benefits. In *Successful Farming*, Thomas Jacobs, whose family has invested in NGCs, offers the following tips for investing:

- Read the disclosure statement. It describes risks in addition to past performance.
- Do your homework on management. Do they have experience in this industry? Have they failed in other jobs?
- Learn about the value-added industry. How strong are any competitors?
- Do not borrow too much money to buy stock. For example, it is not wise to risk the farm on the purchase of stock.

With the recent technological innovations that allow NGCs to produce materials such as particle board and biocomposites, not to mention the food processing products, producers can easily be swept up in the excitement of the future potential of an NGC. David Barton, director of Kansas State University's Arthur Capper Cooperative Center, says that it is crucial to honestly evaluate two questions before continuing on with the development process: (1) Why should we do this? and (2) Why shouldn't we do this? Objectively addressing these questions can substantially lower the risk of the venture's failure, as well as assist in the development of an action plan for the organization (Thyfault 1996).

Cindy Thyfault (1996) proposes an eight-step process to greatly reduce the risk of new business failure. The first four steps study the reasons why the new business could work. The last four steps explore the reasons for not continuing with the project. Her steps are as follows:

1. Assess competitive advantages.
2. Identify a project.
3. Organize a development team.
4. Raise seed capital.
5. Investigate.
6. Develop a comprehensive marketing plan.
7. Develop the business plan.
8. Raise the necessary capital.

While the start-up process can be frustrating and lengthy, the rewards can be well worth the extra effort if the initial planning process is followed carefully (Thyfault 1996).

## **The Elements of Success**

While there are no guarantees, successful NGCs have had a variety of common elements. Several co-ops with similar attributes to NGCs are so successful that their products are household names. Consider Ocean Spray and Blue Diamond, for example. While they have both been in

existence for a number of years and are not considered NGCs, these co-ops have both succeeded in establishing new and innovative markets for their products.

The Minnesota Association of Cooperatives has proposed several reasons why the state of Minnesota has been so successful in developing and operating NGCs. Specifically, leadership, legislative support, and believers are cited as three keys to Minnesota's success. In fact, residents are very devoted to NGCs, and the Minnesota legislature has enacted a variety of laws which benefit NGCs.

Minnesota has a network of support; institutions such as the St. Paul Bank for Cooperatives, the National Cooperative Bank, the Rural Finance Authority, and many others enable the technical, financial, and legal framework to be set in place for continuing cooperative development.

Thriving NGCs have successfully addressed the risks associated with entering into new markets. They have taken advantage of their strengths and found a niche that had to be filled. They have studied the market and know what consumers want. As shown in subsequent case studies, it takes much more than a strong desire to succeed. Success in a new market requires a dedicated, unified group of producers, including those with leadership skills; knowledgeable, informed facilitators; successful, effective management; a strong business plan; a solid market; and supportive financial institutions.

## Potential Problems

A variety of problems can contribute to the failure of NGCs, but there are once again common characteristics among unsuccessful NGC ventures. Unfortunately, many attempts at NGC formation never get beyond the early developmental stages (see **Table 3**).

**Table 3. New Generation Cooperatives: Ten Difficulties Most Often Encountered**

- 
1. Plant specifications not met
  2. Construction contract problems such as delays and overruns
  3. Lack of owner commitment
  4. Noncompetitive business location
  5. Overly optimistic market projections
  6. Unrealistically low operating cost projections
  7. Faulty government-based marketing assumptions
  8. Management problems
  9. Excessive debt-to-equity ratio
  10. Outside promoter rather than producer leadership
- 

*Source:* Minnesota Association of Cooperatives n.d.

The most detrimental component of a new NGC can be the members themselves. If members cannot work together for the benefit of the group as a whole rather than compete with each other, the co-op is most certainly doomed. Perhaps this is the reason why this model of cooperation has worked quite well in the upper Midwest region. Residents in this area have an ancestral tendency to work well in groups or co-ops. Nevertheless, co-ops also succeed in other regions.

Another major hurdle in the formation and operation of an NGC is obtaining capital. When processing facilities can cost more than \$100 million, it can be daunting to even consider finances; however, with a significant number of shares, an array of available grants, low interest loans, tax credits, and other financing options, the goal is certainly not unobtainable.

A related obstacle can often be selling potential members on the benefits of joining the NGC. The concept of buying contract shares in a co-op is relatively new to most farmer-producers, especially when processing is involved. Some producers simply do not see themselves as part of the food production industry, let alone the fiber, oils, or ethanol industries. To these producers, the NGC may not seem like a realistic investment.

Members and facilitators who are devoted to the project and who have a reasonable amount of technical knowledge are needed to explain what a producer can gain through membership. Producers can be more easily convinced to join once they've realized the potential to garner higher premiums and returns on stock.

Finally, the location of the processing facility is an important consideration. Such facilities have a multitude of requirements, including an adequate water supply and land specifications. It may be somewhat difficult to find a suitable building site. An additional problem can arise when members are not able to agree on the location of the building site. Due to the economic potential for the community in which the facility is located, members may want the facility in their immediate area when, in fact, the facility should be located based on market considerations. Such conflicts must be resolved early if the NGC is to move forward in the development process. Internal conflicts that are not dealt with tend to erode the enthusiasm, dedication, and commitment of the organizers until the developmental effort gradually falls apart.

In light of the enthusiasm over the successes of NGCs, organizers and members need to use caution as they proceed with the effort. Brent Bostrom, Chair of Doherty, Rumble & Butler's Cooperative Law Department, has identified ten potential pitfalls for NGCs. These pitfalls are as follows:

1. *Lack of a Clearly Identified Mission.* NGCs must have specific goals and a clearly defined mission that is accepted by its members. Do not simply form an NGC because others belong to an NGC.
2. *Inadequate Planning.* Detailed plans for achieving the identified goals and mission must be established.
3. *Failure To Use Advisors and Consultants.* A team of knowledgeable and experienced advisors and consultants is usually necessary to the success of an NGC.

4. *Lack of Member Leadership.* Leadership must come from within the group. The driving force for NGC success should originate within its members. If an external leader has initiated the entire process, what will happen when this external source of inspiration leaves?
5. *Lack of Member Commitment.* Members must be committed to the project because it will not succeed without their time, effort, and dedication. Often, the early years of an NGC are slow and frustrating. Member commitment is crucial during these times.
6. *Inadequate Management.* Selecting a manager is an extremely important, but often difficult, task for an NGC's Board of Directors. This person can literally make or break an NGC. Supervising and establishing goals for the manager to achieve are also tasks delegated to the Board of Directors.
7. *Failure To Identify and Minimize Risks.* Risk is inherent in any new endeavor, and while it cannot be completely eliminated, it can be minimized. It must first be identified and quantified, however.
8. *Overly Optimistic Assumptions.* Huge future profits may be on members' minds during the organizational phase; however, such profits cannot be automatically assumed, and speculation can hurt the co-op.
9. *Not Enough Capital.* As is typically the case with small businesses, projects tend to outstrip the planned costs. To prevent difficulties from budget shortfalls, it is best to make sure that financing is adequate by carefully planning for contingencies.
10. *Inadequate Communication.* During formation and the critical initial years of operation, high levels of communication are essential so that members know what to expect and are not caught short by unexpected difficulties.

### **Overview of Case Studies**

Many if not most NGCs are formed for the following three reasons: (1) in response to some type of market failure, (2) to secure additional profits through value-added enterprises, or (3) as community economic development venture (Cook 1995). A secondary objective may be to support a specific interest or hobby, which, when successful, can become a secondary income source. In general, the NGCs presented in this collection of case studies come from one of these approaches with the majority being formed because of adverse market conditions for a processing plant or because of another market failure of some type.

As you read the following chapters, notice the commonalities among the NGCs studied. Key leaders who get the job done, who have the ability to maintain cohesiveness among the group, and who remain faithfully devoted to the organization even in the most difficult of times are priceless. Thorough market research and feasibility studies allow the new co-op members to understand the marketplace they are entering as well as the likelihood of success and practicality. It is often stated that "patience is a virtue." These co-ops were not started overnight. For the majority of the NGCs studied, the time and expense to conduct all of the necessary studies and

research before beginning construction or operations was well worth it to ensure success in the future.

### **Poultry/Grain Co-ops**

*Golden Oval.* Golden Oval was formed in the midst of several successful NGCs. The Renville, Minnesota area is known for its development of several successful co-ops. The Golden Oval NGC was formed from a need for increased profits because of the aging membership of its parent company, Co-op Country Farmers Elevator. The board and management of Co-op Country Farmers Elevator felt that they needed to develop a value-added entity that would increase the profits of the elevator and local farmers by processing a crop grown by member-farmers with a high level of technology. After extensive study, the umbrella organization, Midwest Investors of Renville, Inc., determined that adding value through a liquid egg production operation offered the greatest return on investment for members. The founders of Golden Oval obtained the knowledge needed to enter and thrive in a niche market. The results suggest that they made an excellent choice.

It is interesting that the group also explored a large hog confinement facility but opted not to pursue that approach; however, interested parties in the group went on to see this option become a reality in ValAdCo. This NGC was formed on the principle of adding value to corn through swine production. The co-op's facilities have now expanded to span four hog farms with approximately 10,000 sows and breeding, gestation, farrowing, nursery finishing, and boar station units (Merrett, Holmes, and Waner 1999).

### **Grain and Oilseed Co-ops**

*Mountain View Harvest.* At the forefront of cooperative development, Mountain View Harvest Cooperative adopted an entirely new approach to marketing. The co-op was formed in a desperate attempt to save a market for the producers' wheat after a longtime traditional co-op, Farmers Marketing Association, went bankrupt. All of the former co-op's elevators were then under the control of a single company, leaving the farmers little, if any, marketing alternative.

The members of Mountain View Harvest Cooperative soon became owners of the nation's first farmer-owned bakery. The group purchased an existing successful bakery without making any management changes but rapidly expanded the facility as the demand for their product increased. In fact, the need for expansion was so swift that it kept the organization on a tight financial budget even though the group began with a sufficient sum of investment capital. The advantage of purchasing an existing bakery allowed the co-op to move rapidly into the production stage rather than struggling with construction of a new facility. Plus, the expertise of the employees substantially aided in the prosperity of the products.

*Southwest Soy Cooperative.* Poor commodity prices and declining farm incomes caused a group of soybean producers to start Southwest Soy Cooperative. This co-op created a processing facility where soybeans are turned into soybean meal and oil for use in animal feeds. Since it began in 1997, SSC operations have not met financial expectations. This was mainly due to three factors: (1) The crush margin dropped lower than expected, to as low as \$.13. The initial feasibility study made it clear that changes in the margin could make the venture unprofitable;

(2) The SSC was unable to meet its production targets from the outset; (3) The importance of an effective manager is paramount. The SSC lacked effective management capable of properly identifying the markets.

In December 1999, the SSC closed. The experience of the Southwest Soy Cooperative are not necessarily unique. NGCs involve significant risks, especially in changing market conditions. There are several useful lessons to be learned from this venture. Market fluctuations can never be controlled, or even anticipated, completely. Perhaps the most useful lesson to be learned from this experience is the importance of clearly identifying and/or establishing markets prior to starting operations.

*Golden Triangle Energy Cooperative, Inc.* Golden Triangle seems to have developed from a slightly different mold. After unsuccessful attempts to bring existing ethanol industry competitors into their state, the Missouri Corn Growers Association and the Missouri Corn Merchandising Council encouraged members to develop an ethanol plant through an NGC.

Other organizations greatly contributed to this co-op from the beginning. Basically, it was created more out of a desire for economic development than because of a market failure. The justification was that the surrounding area would benefit substantially from this facility with both corn producers and the state feeling the impact through potential amplified premiums and tax revenues.

## **Organic Co-ops**

*Heartland Organic Marketing Cooperative.* Producers trying to keep more of the added-value in the local economy by completing their own processing founded Heartland Organic Marketing Cooperative. The NGC's organic standards add value to its products. The current facility has reached full capacity, and the group plans to expand, creating a greater economic impact on the surrounding communities. The dedication and leadership of the members of Heartland Organic Marketing Cooperative played a major role in this group's success. Key leaders managed the organization, as well as their own farms, as there were no full-time employees in the co-op's infancy.

*Home Grown Wisconsin.* HGW was organized to help organic producers expand their marketing area, as well as increase their profits. Farmers interested in sustainable agriculture set out to cooperatively enter new markets that they could not have without the volume production of the group, since the most lucrative markets were restaurants in large cities. After a variety of initial setbacks which would have resulted in the failure of many co-ops, the co-op not only increased the volume of high-quality local produce purchased in nearby Madison, Wisconsin, but eventually expanded to market the majority of their produce to the Chicago area.

## **Grape/Winemaking Co-op**

*Northern Vineyards Winery.* This NGC was formed in an effort to save the market for members' grapes when an existing winery began making wines from its own grape varieties. The grape producers joined forces to form their own winery using the grapes they produced and adding a local flair.

The group was fortunate enough to have a member with winemaking equipment and experience to assist them in the early operational stages of production. Another boon to Northern Vineyards Winery is its location. The scenic countryside and rich history combine to create a popular tourist attraction. Since its origin, the co-op has more than doubled its wine production.

## **Beef Co-ops**

*U.S. Premium Beef.* U.S. Premium Beef resulted from an effort by producers to save the beef industry's dwindling market share. Plagued by the difficulty of competing with vertically integrated meat protein sources and an inconsistency in beef carcass traits, the beef industry needed revitalization in a short period of time. U.S. Premium Beef developed a coordinated system to help members compete with meat industry giants.

This co-op had the good fortune to align with an industry powerhouse, Farmland National Beef, which is a subsidiary of Farmland Industries. By becoming a partial owner of Farmland National Beef, the co-op benefited from selling the product under brand names which were already familiar to large market segments. The founders of U.S. Premium Beef had timing, knowledge of the industry, a well-known product, and marketing advantage to propel them to success.

*Ranchers' Choice Cooperative.* Unfortunately, not every NGC is a success. Ranchers' Choice Cooperative faced adversity from the beginning. Faced with low commodity prices and a lack of competitive markets for cattle, these ranchers formed an NGC. After numerous complications, the group bought a slaughterhouse to produce a niche market product—kosher beef. Lack of funding, dissension within the group, lack of marketing opportunities, and a natural disaster eventually destroyed the members' dream.

A lesson learned is that investors must have a thorough understanding of the market they will be entering. The members of this co-op were somewhat misinformed about the potential market for the product in several specialty stores. Promising market analyses and feasibility studies must be examined carefully to see if the potential retailers are asked the appropriate questions. It is also important to note the lack of sufficient financing and discontent within the group that played a key role in the co-op's demise.

Of the NGCs examined in this collection, seven are operating successfully, and two have failed. This is not to say that an average of only two out of nine NGCs will not make the grade. The failure rate is probably much higher as it is with small businesses in general.

Market failure or expansion of market share was the main rationale for the formation of six NGCs described in this report; two were formed to add value to the crops currently produced and to increase profits; and one was formed to help spur economic development. Discussions with participants in many of the NGCs, however, demonstrated that local economic development was a serious consideration in many, if not most, of the co-ops. In fact, expanded economic development is usually a requirement for capital investment by local economic development and financial institutions.

## NGCs Across the Nation

During the spring and summer of 1999, the Illinois Institute for Rural Affairs conducted a survey of NGCs in the United States to gather information about sources of funding, membership, the cost of shares, and other economic considerations. Of the 117 surveys mailed to NGCs and Limited Liability Companies (LLCs), 60 responded (51%).

Such ventures seem to be concentrated in the upper Midwest at the present time; however, as the word of the successes of NGCs is spreading, so is the geographic area in which they exist. Of the survey respondents, nearly half are located in Minnesota with another 40 percent in North Dakota and 6 percent in Iowa. Responses were also received from California, Colorado, Georgia, Hawaii, Illinois, Indiana, Kansas, Maine, Maryland, Michigan, Missouri, Nebraska, Oregon, South Dakota, Washington, and Wisconsin.

Either ethanol or some other corn derivative was the main product of 19 of the 60 survey respondents (32%). Various livestock NGCs were the second largest group, comprising 23 percent of the survey respondents. Soybeans, other grains, fibers, vegetables, fruits/wineries, sugar beets, and organic products were also major categories of production with at least four NGCs in each of the preceding categories. Responses were also received from dairy, fish, and purchasing and service co-ops, as well as producer alliances.

Of the responses received, 72 percent were from closed co-ops. NGCs classified as open co-ops comprised 24 percent. LLCs only accounted for 4 percent of the responses. Closed co-ops are not selling new shares, but they may have sales drives from time to time as they expand, needing additional capital and commodity supplies.

The overwhelming majority of start-up capital was obtained through equity shares purchased by members (see **Table 4**). Of the 30 respondents to this question, five NGCs relied entirely on sales of equity shares and, on the average, 53.4 percent of the start-up capital was funded by the purchase of equity shares. This situation demonstrates the importance of a strong organization to attract members and to sell a sufficient number of shares to make the venture viable.

**Table 4. Percentage of the NGC/LLC: Start-up Capital by Source**

	<i>Mean</i>	<i>Maximum</i>
Equity shares (membership fees)	53.4	100
State economic development grants	11.7	100
Local economic development loans	3.9	50
Private lender (e.g., banks, credit union, savings & loan)	2.6	73
Federal economic development grants	2.4	40
Local economic development grants	1.6	12
Local economic development tools (e.g., TIF district)	0.6	5
N=60		

*Source:* IIRA Questionnaire for Cooperatives or Limited Liability Corporations 1999.

The NGCs and LLCs varied dramatically in the amount of total capital required. Among respondents to this question, the total capital requirement ranged from \$17,500 to \$24,000,000, with a mean of \$7,820,850. As might have been expected, the cost per share also differed widely. Shares of equity ranged from a minimum of \$2.00 to a maximum of \$1,300,000, with a mean cost per share of \$44,119.

The entities surveyed also differed in size. Current memberships of these NGCs range from 3 to 8,432 members. The mean number of members is 743 for 53 respondents to this question. Of course, the number varies greatly depending upon the geographic area covered by the co-op and the nature of its product(s).

The characteristics of the members differed as well. Five respondents noted that the average farm size of members was fewer than 100 acres, while two co-ops reported average member farm sizes of 101 to 200 acres. Co-ops producing fruit and vegetable products, nuts, and fisheries have members with smaller acreages due to the land intensive nature of these commodities. One responded with 201 to 300; three returned an answer of 301 to 400; and five noted an average farm size of 401 to 500 acres. Finally, 16 groups reported over 500 acres per farm. These larger farms are due to the nature of the commodity produced. Co-ops in these categories were mostly grain and oilseed co-ops; however, beef farms were also among the larger sized groups due to the land required for pasture.

The geographic distribution of the members involved local groups as well as broad regions. Of 44 responses to a question on the area covered by the co-op, 41 percent had a membership concentrated within several counties, and 11 percent were statewide organizations. The groups with a membership base covering several states comprised 36 percent while the remaining 11 percent claimed other distributions. This variance can partially be explained by the local or regional nature of production of some commodities such as grapes or vegetables, while others can easily be produced in a much broader area such as wheat and corn. In addition, some perishable items must be grown in close proximity to one another for marketing purposes. On the other hand, some NGCs, such as U.S. Premium Beef, have members in an extremely diverse geographic area.

Survey results consistently show that capturing more of the added value of crops and low commodity prices are the dominant factors in NGC/LLC formation (see **Table 5**). Other issues of notable importance include vertical integration of production and declining farm supports. Surprisingly, replacement of an existing processor was not an important factor for the sample as a whole, although it provided the immediate stimulus for several. This comparison shows the widely divergent reasons for NGCs and the fact that they can be used to address many concerns of producers.

The survey also asked who was instrumental in initiating discussions regarding the formation of the NGC/LLC. Fifty-seven responses to this question were received. Farmers-producers initiated the process in 86 percent of the cases. An existing grain elevator co-op was responsible in 21 percent of the responses. Local economic development groups were the driving force in 17 percent; investors seeking to enter new domestic markets initiated 2 percent; and the remaining 10 percent came from other sources.

**Table 5. Reasons Stimulating the Establishment of the NGC/LLC**

	<i>Mean</i>
Attempt to capture more value from crops	4.914
Low prices for commodities	4.559
Vertical integration of production	4.242
Declining farm supports	4.156
Environmental regulations	3.206
Need to create local jobs in rural community	3.118
Increasing costs of technology	2.939
High unemployment among farm families	2.909
Tax advantages of NGC or LLC	2.886
Free trade and globalization of markets	2.594
Experience with previous co-ops	2.588
Raise capital to expand existing business	1.545
Replace a processor that had closed	1.500
Coding: 1=not important, 3=moderately important, 5=very important; N=60	

*Source:* IIRA Questionnaire for Cooperatives or Limited Liability Corporations 1999.

The specific organizing group naturally depends on the commodity or product being created. For grain operations, it only makes sense for elevators to actively participate. It is especially significant that farmer-producers are the main driving force in a majority of cases.

The time lapse between the initial discussions about forming an NGC or LLC and it becoming operational ranged from 6 to 18 months. Of 38 responses, 13 percent had become operational in fewer than six months; 29 percent required 6 months to one year for operations to begin; and 32 percent needed one year to 18 months to become operational. Nearly one in five (18%) reported a time lapse of 18 to 24 months, while only 8 percent required more than two years. The main point of this comparison is that when farmer-producers realized the need and became committed, it did not take very long to bring the idea to fruition.

## **Obstacles**

The formation of an NGC/LLC can present many obstacles (see **Table 6**). According to this survey, the most significant obstacles were marketing the product, borrowing funds from local financial institutions, and attracting enough members to participate. These issues, of course, must be addressed early in the process and should be reflected in the feasibility study or business plan. Somewhat unexpected is that finding members to replace those who quit does not seem to be a problem. Perhaps the co-ops are well enough established at this point that the co-op is perceived as successful or likely to be in the future.

**Table 6. Obstacles to NGC/LLC Formation or Operation**

	<i>Mean</i>
Marketing the product	3.781
Borrowing funds from local financial institutions	3.469
Attracting enough members to participate	3.382
Retaining members during the early or unprofitable years	3.129
Attracting an experienced manager	3.000
Developing a plan of operations from the start	2.906
Low commodity prices	2.897
Hiring a qualified labor force	2.710
Finding members to replace those who quit	2.400

Coding: 1=insignificant obstacle, 3=moderate obstacle, 5=significant obstacle; N=60

*Source:* ILRA Questionnaire for Cooperatives or Limited Liability Corporations 1999.

*Competition.* Competition from other businesses was a factor for many groups forming NGCs. Among those surveyed, 55 percent had to face existing competitors in their industry. Of these respondents, 44 percent met severe difficulty from the competitors. Examples of competition include other NGCs/LLCs (7%) and local elevators (29%). Since the NGCs are, in fact, businesses operating for a profit, they must compete with other businesses or agencies providing similar products or services, and the NGC is usually the newcomer trying to break into an established industry. For this reason, it is crucial that the location of the processing plant relative to unserved markets be advantageous.

*Management.* Having an experienced and skilled full-time manager can help combat many obstacles. Of 38 respondents, 68 percent have a professional full-time manager. Thirty-four replies noted that the co-op has full- or part-time employees with the mean number of full-time employees at 50. One co-op has 800 full-time employees. The maximum number of part-time employees is 300 with a mean of 14.

*Technical Assistance.* Most NGCs need and seek some type of technical assistance in starting operations. In fact, a variety of sources are frequently utilized in combination. Over 38 percent of NGCs surveyed sought assistance from the Cooperative Extension Service, 46 percent from local economic development agencies, 56 percent from state economic development agencies, 41 percent from the U.S. Department of Agriculture, 23 percent from the Farm Bureau, 38 percent from private consultants, 46 percent from lending institutions, 47 percent from their state department of agriculture, and 38 percent from other NGCs.

The usefulness of this assistance may be substantial or may leave much to be desired. In the survey, NGCs were asked to rate the quality of the assistance received from each source used on a scale of one to five with one being not helpful, three being moderately helpful, and five being

very helpful. Other NGCs received the highest rating with a mean of 3.818. State departments of agriculture followed with a mean rating of 3.640. State economic development agencies and private consultants were ranked third with means of 3.500. Local economic development agencies (mean = 3.464), the USDA (mean = 3.346), lending institutions (mean = 3.333), and the Cooperative Extension Service (mean = 3.192) all were rated better than average. The Farm Bureau was rated slightly lower with a mean of 2.545.

### Factors Contributing to Success

The surveyed agencies rated factors contributing to the success of the co-op (see **Table 7**). Successful marketing of the product is very important. Other critical factors include accurate perception of the need for the product, financial commitment of the members, effective management practices, and favorable market conditions. Employing an experienced professional manager and the availability of local finance are also extremely important as might be expected.

**Table 7. Factors Contributing to the Success of the NGC/LLC Effort**

	<i>Mean</i>
Successful marketing of product	4.833
Accurate perception of need for product	4.600
Financial commitment of members	4.600
Favorable market conditions	4.543
Effective management practices	4.514
Employing an experienced professional manager	4.424
Availability of local finance or capital	3.939
Coding: 1=not important, 3=moderately important, 5=very important; N=60	

*Source:* IIRA Questionnaire for Cooperatives or Limited Liability Corporations 1999.

These ratings compare closely with important points in the case studies to follow. U.S. Premium Beef and Mountain View Harvest Cooperative obtained a competitive edge in the marketing arena by buying into existing branded products with which consumers were already familiar. Ranchers' Choice Cooperative's failure was due largely to a misconstrued perception of the need for their product. The financial commitment of the members is notable in nearly all of the NGCs studied. A professional manager can make a tremendous impact on a co-op's sales and operations. For example, Home Grown Wisconsin switched managers and witnessed a total change in the sales focus of the organization. Golden Triangle was fortunate enough to have a large sum of the necessary financing provided by community organizations.

*Financial Success.* The general financial status of the NGCs/LLCs was also addressed in the survey, and 38 NGCs responded. Only 3 percent were not financially successful, while 13 percent were not yet profitable but expected to be in the near future. Eighteen percent were currently at the breakeven point and moving toward financial success. The largest group, 36

percent, was listed as very profitable; however, 21 percent noted that it was too soon to tell, and 10 percent did not know the status of the finances. The mean time for an organization to operate profitably was 20 months with a maximum time of 156 months.

Finally, the trends in sales during the past five years were analyzed. Only 27 responses were received, but the NGC/LLC had to have sold a product for at least five years to be included. Consequently, the possible responses were limited. Sales more than met expectations for 33 percent of the respondents. Forty-eight percent felt that sales matched expectations; however, for 19 percent, sales were less than expected.

As with the ingredients of forming a successful NGC, these results indicate that it is not necessarily the type of NGC that guarantees successful sales. Co-ops with less-than-hoped-for sales produce everything from fruit to cotton to ethanol. Likewise, NGCs with sales over expectations produce sugar, organic produce, fish, turkey, and once again, ethanol.

So what is it that differentiates these co-ops? The high sales NGCs are typically located in areas with strong ties to co-ops. The majority have a fairly substantial number of members compared to the average NGC and a full-time manager; however, this is also the case with some of the low sales co-ops. It seems that producers must carefully evaluate the market and the need for the product in the trade capture area. A locality already concentrated with ethanol plants is unlikely to be a successful environment for a new ethanol facility.

Like any agricultural producer already knows, sometimes even the most extensive planning, hard work, and a good product may not yield the most profits. It also takes timing, anticipation of need, and a little cooperation from “Mother Nature” to have a successful year—even the best of years is no promise of what the next will bring. Of course, a little good luck never hurts either. Agriculture is constantly changing and so is the demand for its products. NGCs must stay on top of their game or be left in the dust.

## **Summary**

NGCs offer agricultural producers an opportunity to compete in today’s global marketplace. By adding value to farm products through processing, these co-ops help keep a greater portion of the profit in the hands of producers. Working together, the economies of scale needed for vertical integration can be obtained. NGCs often result from a group effort to correct a market failure. Low commodity prices and eroding rural economies have brought more focus to such topics. Rural economic development efforts focus more often on agriculture.

While there is no recipe for success in developing an NGC, the number of current thriving operations allows for comparison of characteristics. A strong and committed membership core with leadership capabilities, strong equity financing, and technical guidance can assist in the development of a successful NGC.

The possibilities with increasing technology and expanding niche markets are only limited by the imaginations of farmer-producers. NGCs, LLCs, and other ventures offer many opportunities for producers to participate more fully in the value chain as the food products head for the consumers’ tables. NGCs are only one approach but as will be shown in subsequent

discussions, they have been very effective in helping producers organize in such a way that they can capture a larger share of the food dollar. NGCs can truly help America's rural population enter the new millennium with hope for a better future.

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## **New Generation Cooperatives: A Short History of the Idea and the Enterprise<sup>1</sup>**

*by Igor Kotov*

The development of cooperatives in the Upper Midwest from the 1970s through the 1990s provides vivid examples of several new phenomena and trends. Among the most important are the New Generation Cooperatives (NGCs). The term, used since the mid-1990s, was proposed by the Centre for the Study of Cooperatives, University of Saskatchewan, Canada (Stefanson, Fulton, and Harris 1995, 1-7). These NGCs represent the newest wave of U.S. co-ops. While earlier generations had emerged in the 1900s, the 1920s, and again in the 1940s, NGCs have several features that distinguish them from traditional farmers' co-ops.

First, their major focus is value-added processing, which represents a departure from the main objective of commodity marketing held by predecessors. NGCs integrate the entire venture of growing crops or feeding livestock, processing farmers' products, and producing "ready for sale and consumption foods." Building such an enterprise requires equity investment prior to establishing delivery rights. Equity shares in NGCs are higher than in traditional co-ops, and each share entitles a member to deliver one unit of a farm product (e.g., one bushel of wheat) to the co-op and requires the co-op to take delivery of this product.

Thus, another major difference between traditional co-ops and NGCs is how the organizations are capitalized. According to Bill Nelson, director of the North Dakota Center for Cooperatives and an active promoter of NGCs, "In a new generation co-op you capitalize it in advance and then you use it. In the traditional co-op, you used it and they retained some of the profit margin to maintain the co-op" (Aksamit 1999, E2). Initially, it may be easier for a farmer to be a member of a traditional co-op since membership in a NGC has more obligations and is more expensive.

Another feature distinguishing NGCs is restricted or limited membership. The number of equity shares is limited by the requirements to build a plant or process a product. The admission of members stops after all shares have been sold. On the other hand, NGCs preserve some fundamentals of traditional co-op structures. For example, decisions at the membership meetings are made according to the principle "one member, one vote"; excess earnings are distributed among members as dividends; and the board of directors is elected from the members by the membership.

While NGCs have grown in many states and involve livestock, grain, fruits, and vegetables, the Great Plains states were the early leaders in the development of NGCs and have some of the most successful ventures. This case study traces out the history of co-ops in these states and

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<sup>1</sup> This case study would have been impossible without help from the staff of the Quentin Burdock Center for Cooperatives at the Agricultural Economics Department of the North Dakota State University: Bill Nelson, Frayne Olson, Kathy Doyle, and Ed Janzen.

provides insights into reasons why the NGCs became popular in the 1970s as well as the 1990s. The presentation has three main sections.

1. The adverse conditions faced by farmers as the processing industry grew and represented more and more of consumer spending for food items are discussed.
2. The shift to the co-op movement to control the cost of inputs and bring essential services to rural areas is presented along with the groundwork it laid for the NGCs to come later.
3. An overview of several NGCs is presented to provide a backdrop for more extensive discussions of specific NGCs to come later in this report.

### **History of Cooperatives**

The concept and practices of co-ops in general and for NGCs in particular have a long and complicated history. Since the founding of the United States, and until the early 1900s, agriculture was the nation's leading industry. A majority of the population was engaged in farming; at the same time, however, rural producers created the initial capital for industrial development in the United States.

The success of agriculture meant major changes for farmers' in their work and lives. Farming ceased to be a primitive occupation as agricultural producers gained access to technology previously enjoyed only by city residents. Concurrently, farming became less and less profitable compared with other industries and occupations because technology increased production levels and reduced costs without an increase in commodity prices. This trend is vividly reflected in the so-called "cost-price squeeze."

Farmers found the prices for their products lower compared with the nonfarm commodities they had to buy. In 1923, Secretary of Agriculture Henry A. Wallace pointed out that a suit of clothes which cost a North Dakota farmer 21 bushels of wheat in 1913 cost 31 bushels ten years later. Using the purchasing power of several basic farm commodities in 1913 as 100, the farm price index had dropped to 75 in 1921 (Fite and Reese 1965, 559).

Another problem was the obvious disparity in distribution of incomes resulting from the sales of final food commodities among those who produced, processed, delivered, and sold those goods. In 1910, \$.15 of every dollar generated in agriculture went to those who delivered inputs necessary for farmers—seeds, equipment, fertilizers, and so on. The farmer's share was \$.41, and an additional \$.44 was spent on transportation, processing, wholesale, and retail businesses. By 1990, however, the farmer's share had shrunk to \$.09 while the agricultural suppliers received \$.24, and the processing and marketing share rose to \$.67 (Nadeau and Thompson 1996, 15).

Consequently, farming is no longer as attractive a business. This negative trend has been felt especially in the Upper Midwest states whose economies traditionally have relied heavily on agriculture. The number of farms and the rural population have steadily declined during the past century.

The declines in agriculture are not just an economic change; they are the phasing out of a cornerstone of American life. Noted Arthur Capper (1931), a founding father of the 1922 Capper-Volstead Act, “Farming is more than a business. It is more than an art; it is a philosophy of life” (52). The Capper-Volstead Act almost completely exempted farmers’ co-ops from the antitrust laws and gave them substantial privileges compared with noncooperative big businesses.

The 20th century farmer’s problem appears to be relatively simple. Agricultural producers should seek a bigger share of the consumer dollar and move from selling commodities to selling ingredients or branded products. That goal is not easily realized, however, and since the late 1800s, there have been many attempts to find a way out of the above-mentioned “cost-price squeeze” and income disparity. Political, economical, cultural, and technological strategies were tried, but mostly with little success.

### **Political Action**

Decisive steps were taken by farmers in the Upper Midwest using the vigorous efforts of the Nonpartisan League, one of the most famous of the U.S. farmers’ organizations. The grandparents and great grandparents of many current North Dakota farmers were active in the League from 1915 to 1922. According to J. H. Worst, former president of the then North Dakota Agricultural College in Fargo, in 1916, farmers in the state lost \$55 million because of unfair practices by middlemen in the grain trade (Morlan 1955, 3).

Farmers listened intently to presentations at numerous Nonpartisan League meetings, and those explanations may be timeless. The Nonpartisan League spokesman said, “‘Here is a dollar. For every dollar worth of stuff you raise on this farm you get just 46 cents.’ The speaker counted out one quarter, two dimes and a penny. ‘This is what you get. But here—laying in another pile the other quarter, dime, three nickels, and four pennies—is what the other fellow gets—the fellow who didn’t put in a day plowing and planting and harvesting. Now what you want is more of this pile. You want your share of that dollar the consumer pays for what you raise by backbreaking work. The other fellow gobbles this because he is organized. He controls the market—he makes the laws—he gets the money’” (Morlan 1955, 30).

A majority of leaders in the Nonpartisan League preferred political action to solve farmers’ problems and they succeeded in state and federal elections. Nonpartisan League officers were instrumental in establishing several public elevators and mills in the state which, to some degree, eliminated the disadvantages created by the efforts of middlemen. These efforts were created from the top, however; farmers themselves didn’t participate in the enterprises with their property. Consequently, when the economy improved after 1922, prices proposed by private buyers of farm commodities increased and farmers ceased to support the Nonpartisan League’s initiatives. Instead, they turned to their “main foe”—the notorious middleman.

### **Development of Cooperatives**

Farmers’ co-ops offered another solution to the food consumer’s dollar share problem. In the late 1800s, agricultural producers began to capture additional links in the “farmer-consumer

chain” by creating value-added processing co-op. The first enterprises of this type were co-op creameries that processed farmers’ milk into cream, butter, and cheese. The profits were shared among farmers.

The first co-op creamery in Minnesota was organized in 1890. By the early 1920s, the Minnesota Cooperative Creamers’ Association had been founded as a sales and service association. It helped members to manufacture the highest quality butter, to standardize it in composition and quality, and to secure the lowest possible freight rates to haul the butter to market. It also created an increased demand and a higher price through advertising to develop new markets. Co-op creameries in Minnesota proved their profitability for farmer-members. Throughout the 1920s, the co-op creameries paid farmers \$.05-\$.10 more per pound of butterfat than was paid in communities without co-op creameries (McGuire 1925, 32-36). Thus, these co-ops added value to the farmers’ product, in this case milk, and brought a certain part of that added value to milk producers, giving them a larger share of the consumer’s dollar.

Another example of the success for a co-op creamery success in the Upper Midwest is in North Dakota. The oldest co-op creamery in the state was started in 1908, but most were organized in the late 1920s. They successfully survived during the Depression and the drought of the 1930s (DAL 1943, 3-6). By the end of the decade, North Dakota co-op creameries reported fair financial returns, which improved even more during subsequent decades.

In 1943, co-op creameries in North Dakota were second among other co-ops with the average business transaction priced at \$655 per stockholder. Co-op elevators led the co-op movement with stock priced at \$1,609 per share (DAL 1943, 11, 8). The co-op creameries provided convenient investments. The latter proved to be attractive for large food corporations as well and resulted in the growth of competition that led to co-op creameries being squeezed out of business during the 1950-1960s.

The idea of a value-added co-op business or of vertical integration in agriculture represented by co-ops has been actively promoted by farm activists and political leaders since the 1920s. Many noted that the early American farms were highly integrated since many foods and other goods were homemade. Until farmers had a surplus beyond their own needs, they had nothing to sell to improve their standard of living.

Industrialization changed the situation. Farming became primarily production agriculture, while processing, marketing, and farm services were provided by others for a profit. Food production turned into a new type of industry, with successful corporations processing and marketing agricultural commodities. The question was (and still is), “will agriculture be integrated by and for the benefit of the farmers, or for the benefit of suppliers, processors, and distributors at the expense of farmers?”

Sugar beet growers in the Red River Valley first attempted to create processing facilities in the early 1920s through an initiative by H. A. Douglas, president of the privately owned Minnesota Sugar. By 1923, the total acreage for sugar beets had grown sufficiently and he declared that his company would spend \$1 million on a beet processing plant. This sum was not

enough for the construction, however. Douglas proposed that farmers raise another half million dollars in stock capital.

By early 1924, commercial clubs in Grand Forks, North Dakota, and the surrounding area had sold stock worth \$300,000 and borrowed another \$100,000. Soon the Red River Sugar Company was established to manage construction of the new plant. As a stock enterprise, it might be seen as a first attempt to create farmer-owned processing facilities for their crops.

Soon Douglas received a proposal from a much larger company, the American Beet Sugar Company (later it was renamed American Crystal Company), to sell the company's existing plants as well as all the assets of the nascent Red River Sugar Company for almost \$3.5 million. The deal was completed in March 1925. The new owner managed the construction of the sugar beet processing plant in Grand Forks, which was completed by the fall of 1926 (Shoptaugh 1997, 18-20). The money raised by farmers and other potential stockholders was returned because the beet growers had not created a co-op; rather, they had obtained excellent facilities and profitable relations with a private business. These relations remained good until the 1960s.

During the Great Depression, several federal acts were passed containing substantial measures that provided financial support to farmers. Such support was furnished to sugar beet growers by the Jones-Costigan Act (the Sugar Act) signed by President Franklin D. Roosevelt in May 1934. Farmers received federal payments for each unit of beets based on market prices that sometimes were extremely low. The majority of farmers favored such supports, but many, as well as officers in the co-ops, understood not only the usefulness of these payments, but also the possible hazards. H. J. Beernink, president of the National Council of Farmers Cooperatives, noted in 1958, "The farmer, working through his cooperative in an integrated service, has a chance to be competitive in today's business world. . . . The controversial government price support program is nothing more than a contract to buy farm commodities at a stipulated price" (3).

### **Role of Price Supports**

The history of North Dakota agriculture shows that the government's price support system cannot stop negative drifts in commodity prices. Unfortunately, during the 1960s and 1970s, most of the efforts of North Dakota farm organizations were directed towards obtaining infusions of state and federal funds.

Since the early 1950s, national farm referendums were held to assess the public's attitude regarding the federal price support system. North Dakota farmers supported the system more often than the average American farmer in these surveys. For instance, during the 1957 referendum, 98 percent of North Dakota farmers voted "yes" for a federal government price support at 75 percent of parity. This meant farmers would receive three-quarters of the actual cost of their crops from the federal government. Nationally, only 86 percent of farmers voted in favor of the supports (Conrad and Conrad 1976, 183). The same attitudes were reflected in the following decade. Strengthening the government's financial support for farmers was a focus of longtime North Dakota Senator, Quentin Burdock, who received overwhelming support from farmers during his many political campaigns.

Growing federal support for North Dakota farmers did not stop the negative financial trends, however. From 1959-1964, approximately 6,000 agricultural producers in the state quit farming (Conrad and Conrad 1976, 217). Moreover, there is evidence to support the hypothesis that the financial support started to undermine farmers' incentives to be self-reliant and self-starters.

Governmental attitudes toward agriculture changed. The costly Vietnam War and NASA's expensive mission to reach the moon pressured the federal budget, and price supports had dropped to 65 percent of parity by December 1970. A majority of North Dakota farmers had stopped buying farm machinery suggesting that farmers had begun to rely more and more on governmental support payments. The situation for American farmers, especially North Dakota wheat growers, did change for the better after 1972, when the Soviet Union started buying huge amounts of American grain; however, these purchases were curtailed in the late 1970s.

### **New Generation Cooperative Successes**

By contrast, other developments in North Dakota in the 1960s had brought farmers new hope. Alternative approaches to address farmers' financial problems started to emerge among Red River Valley sugar beet growers. By 1960, they were satisfied with their contracts for sugar beet deliveries to the privately owned American Crystal Company, one of the largest sugar producers in the world.

But a few years later, beet growers feared American Crystal's business practices might be hampered by the composition of its board of directors. A large block of the American Crystal stock was held by the Boettcher family in Denver, Colorado. This family controlled the Boettcher Foundation, a large charitable organization concerned with philanthropy within the environs of Denver. Some of American Crystal's corporate profits were being transferred to the Boettcher Foundation for various causes. While legal, these transfers were contrary to the best interests of farmers who wanted profits to be invested in the sugar business (Shoptaugh 1997, 129-130). This situation seemed to indicate that full reliance on private business, even though successful and profitable for farmers, had potential pitfalls. Farmers depend heavily on such a business because it is a main foundation for their economy. On the contrary, private investors usually have more options than farmers and can easily reject these interests.

The Red River Valley farmers/beet growers did not seek government intervention but, instead, took action to buy the processing plant. A prominent expert on remuneration of financially ill businesses, Richard Barry (1981) of Fargo, raised the NGC idea:

In the fall of 1963 one day I asked a farmer from the Wahpeton-Breckenridge area, which did not have a refinery outlet, about an idea I had to raise millions of dollars in equity money. He said he'd be happy to invest approximately \$1.00 per ton in equity capital each year for ten years if I could teach him and other farmers how, as a group, they could own their own sugar factory. (29)

By the fall of 1964, 2,000 farmers in the Red River Valley organized development groups to obtain new factories. They were not growing sugar beets at that time, but they would consider

converting 10-15 percent of their acreage to sugar beet production. Their major obstacle was attracting companies with the know-how and sufficient capital to build additional plants (Aksamit 1999, E2). Development of a value-added co-op owned by Red River Valley growers started in 1967, but it took six years to reach fruition. The most prominent role in this case was played by Aldrich Bloomquist of Moorhead, who had initiated the effort that resulted in growers purchasing the investor-owned sugar company.

Farmers formally acquired the American Crystal Sugar Company from the Boettchers on February 21, 1973, with a transfer of ownership to the producers' organization, Crystal Growers Corporation. Growers raised \$20 million of the equity capital at the rate of \$100 per acre. Further financing came from the St. Paul Bank for Cooperatives, a bank specializing in granting credit to cooperative enterprises (Egerstrom 1994, 148-49). Crystal Growers Corporation provided a model for future NGCs, started by farmers to achieve a better price for commodities and more control of their businesses.

About the same time, that the American Crystal co-op was being formed, two other groups of farmers were developing plans to obtain processing facilities to be operated as co-ops. In Wahpeton, North Dakota, new sugar beet growers were considering entry into the processing industry by constructing a facility. In 1974, Minn-Dak Farmers Cooperative began operating with the newest sugar beet processing plant in the country. Like the American Crystal efforts, the Wahpeton group secured commitments from farmers to invest \$200 for every acre planted, giving them one share of stock for every acre committed to the co-op. Additional debt financing was supplied by St. Paul's Bank for Cooperatives after growers signed a 15-year agreement with the co-op.

Near Renville, Minnesota, sugar beets were planted sparingly and nearly abandoned in 1971 when then privately-owned American Crystal closed the processing plant in Chaska. "We had the equipment and the know-how, but not the processing facility," said Larry Johnson, a local beet farmer. He and other members of a local growers' association persuaded neighboring farmers to add sugar beets to their operations. For every \$200 per acre invested, growers received one share of stock in the co-op. By the spring of 1975, 50,000 acres of sugar beets were sprouting and soon the Southern Minnesota Beet Sugar Cooperative operated its processing facility (Jacobs 1990, 6).

This NGC, which was incorporated in 1975, did not do as well as the American Crystal co-op. Because of substantial losses and ineffective management, the banks foreclosed on the co-op's loan in 1978. The banks had two choices: (1) to sell off the assets, or (2) to sell the plant back to the farmers at a greatly reduced price. The banks chose the latter. Consequently, the farmers became the real owners of the plant, and the co-op got a second start. The co-op has been profitable ever since (Nadeau and Thompson 1996, 18).

The 1980s brought a lull in co-op development in the Upper Midwest. The situation may have resulted from increasing economic difficulties and sharp budget cuts to agriculture brought about by policies of the Reagan administration and the national recession. By the end of the decade, an obvious economic and, to a certain degree, social decline was evident in North Dakota. The state ended the 1980s with 634,000 people, down 18,000 from 1970. Most of the

loss was in the rural areas (Nilsson 1997, 32). It was clear that something new and effective was needed to help North Dakota agriculture.

Even during those difficult times, however, the sugar beet processing facilities of three value-added co-ops—American Crystal Sugar Company, Minn-Dak Farmers Cooperative, and Southern Minnesota Beet Sugar Cooperative—helped provide jobs and economic stability for many small towns in the region. While the downturn in the farm economy during the mid-1980s adversely affected many agriculturally based communities of rural Minnesota and North Dakota, the sugar beet industry remained strong and mitigated the effects of the farm downturn by pumping badly needed dollars into the rural economy. In six of the seven communities with a sugar beet processing facility, the co-ops were the largest employers and taxpayers (Jacobs 1990, 4-5).

The business culture during the first half of the 1990s in the Upper Great Plains has been called “cooperative fever” because of how rapidly value-added co-ops were being created, developed, and distributed. By the end of the decade, 20 NGCs were operational in Upper Midwestern states. Thus far, a majority of them are operating successfully.

The overall impact of the co-ops on many local communities has been significant. Successful NGCs not only improve incomes for farmers, they generate jobs for the nonfarm population too. The number of nonfarm employees hired by an NGC varies. However, the Sunrise Energy Cooperative in Blain, Iowa, has hired 14 full-time nonfarm workers (Lucas 1999). Other cooperatives such as Golden Oval Eggs in Renville, Minnesota, have hired over 60 full-time employees (Persson 1999). In addition to generating higher farm incomes and nonfarm jobs, NGCs contribute to the local tax base and provide job opportunities for young, educated people.

NGCs in the Upper Midwest process most commodities produced by farmers: wheat, soybeans, sugar beets, meat, poultry, and dairy products. They also produce different products as well—from pasta and cheese to ethanol. The following success stories may motivate other agricultural producers to form similar co-op structures.

### **Pasta Growers**

One of the most successful of the value-added co-ops operating in the Upper Midwest is the Dakota Growers Pasta Company (DGPC), owned by approximately 1,000 wheat farmers from North Dakota, western Minnesota, and eastern Montana. The NGC has a state-of-the-art, \$40 million pasta factory outside of Carrington, North Dakota. Groundbreaking for the plant was held July 9, 1992, and it began operation in November 1993. In December 1993, *Pasta Growers* brand pasta products arrived on store shelves across North Dakota. In the coming months, they were distributed nationally. The plant created 180 new jobs in Carrington. All of the wheat processed at the plant is provided by farmer-members. According to Jack Dalrymple, chairman of the board of directors, the impetus to build the plant came from a steering committee formed by the U.S. Durum Growers Association.

In 1995, DGPC produced about 100 million pounds of pasta in 50 different varieties under its own brand. After only its second year of operation, the co-op generated a profit of \$.46 per share, distributing \$.31 per share in cash to farmer shareholders and retaining the remainder for operating reserves. The farmer-members not only received the current market price for the Durham wheat sold to the co-op, but they also earned a 20 percent annual return on their co-op investment.

In early 1996, the co-op issued new equity stock in order to finance a \$5 million expansion to double the milling capacity of the plant. The wheat growers had so much confidence in their co-op that sales of stock far exceeded the stock sales target (Nadeau and Thompson 1996, 19). In 1997, DGPC doubled its milling and pasta production capacity, and this year the co-op acquired Primo Piatto, Inc., a pasta processing company with two plants in the Minneapolis area. DGPC is now constructing a \$10 million mill next to the Carrington mill to keep pace with its increased processing demands (Sorenson 1998, 9). DGPC shares, originally offered at \$3.85 each, currently sell for \$10 (Tonneson 1999, 8). As Randall Torgerson (1994), assistant administrator of the U.S. Department of Agriculture Cooperative Services, noted, “it had been the success of the pasta growers cooperative which breathed new life into other cooperative initiatives in North Dakota, and generated the above-mentioned co-op fever” (12).

### **Heartland Grain Fuels**

Founded in 1993, Heartland Grain Fuels is a joint venture involving two co-ops—South Dakota Wheat Growers and Farmland Industries—that operates the largest ethanol operation in South Dakota. Its Aberdeen plant processes 6,900 bushels of corn a day, seven days a week, producing more than 6 million gallons of ethanol annually. In addition to providing a new market for corn, the plant created 23 jobs and an \$800,000 payroll in the community (Parsons 1995, 6).

Certainly, the success of NGCs is not guaranteed from the start. There are examples of unsuccessful NGCs that had to quit operations after being unable to meet market realities and members’ needs. The next section expands on this cautionary note to describe some NGC failures and the characteristics of NGC member and nonmembers farmers.

### **Evaluating Success and Failure Among NGCs**

Northern Lights Vegetable Cooperative of Brooten, Minnesota, formed by 65 vegetable producers as part of a joint venture with privately owned Patterson Frozen Foods, operated a frozen pea and sweet corn processing plant. In May 1998, the co-op folded and sold the plant to Lakeside Foods, a corporation based in Manitowoc, Wisconsin, that processes and cans food products for sale to private label companies.

Some of the co-ops’ former members chose individual production contracts with Lakeside SnoFlake Products Cooperative in Oslo, Minnesota (Sorenson 1998, 11). This co-op went bankrupt in the fall of 1997, a year after 60 producers bought a plant in Oslo, to process carrots. Under pressure from a depressed market, the co-op tried to combine its efforts with similar developing ventures in Hillsboro, Hatton, and Casselton, North Dakota, but without success.

Board member Tom Osowski identified the main downfall as haste: “We hurried too much. But maybe seeing our mistakes will make others more cautious” (Sorenson 1998, 12).

These and other NGC failures have not spread negative attitudes about co-ops, however. Farmers understand the value of co-ops for them, while at the same time realize that a co-op is not in itself the panacea for their problems. Solutions may involve good, profitable, fairly managed co-ops as well as completely different ones. As a United Spring Wheat Growers co-op member, Montana farmer Larry Johnson said, “You need capital to make the business work. Farmers who form these closed co-ops are able to gather huge amounts of cash and hire the people necessary to form the processing side of the business.” (Getting together: Farm forum roundtable 1999, 17). At the same time, as Steve Hofing, agriculture analyst of Savoy, Illinois, noted about the possibilities of NGCs, “There isn’t going to be a windfall. The key is to determine what specifications your customer needs and whether you can serve them” (17).

Sociological investigations that have included interviews with leaders and members of the NGCs document the stability and usefulness of this business structure. Kibbe (1996) and later Olson, Kibbe, and Olson (1998, 4) of North Dakota State University, surveyed more than 500 North Dakota farmers using a questionnaire sent to members and nonmembers of value-added co-ops. Nonmembers more strongly agreed with statements critical of the NGCs such as “Investments required from the farmers for joining value-added co-op are too high for them”; “contract co-ops benefit only the wealthy producers”; “delivery contracts are too strict”; “farmers should not own food companies”; “the value-added contract co-ops offer inferior quality products.” Nonmembers were also less confident regarding the contract co-ops’ abilities to compete successfully with investor-owned firms (81-82). These findings indicate that participation in value-added co-ops helps farmers overcome a prejudice against co-ops. The educational level of NGC members participating in the survey was higher than the nonmembers. Approximately 41 percent of the co-op members had a college degree compared with 18 percent of nonmembers (Olson, Kibbe, and Goreham 1998, 2).

For this report, a brief investigation regarding attitudes of Upper Midwest NGC leaders was undertaken. A short questionnaire was given to CEOs and board members of approximately 20 NGCs during an executive training program for leaders of New Generation Processing Cooperatives in March 1999 in Alexandria, Minnesota. Nineteen answer sheets were returned. Most respondents had farmed and belonged to the NGCs for more than ten years. Almost half of them noted general unfavorable economic changes for farmers as the main reason for starting co-ops. One-third of respondents reported that private owners could not run the processing plants successfully so co-ops were formed. All the respondents were convinced that the NGCs had proven advantageous for their members. Only 10 percent of the respondents noted that NGC members would leave the co-op if market prices proposed by private buyers started rising substantially.

Recent developments in the Upper Great Plains confirm the popularity of value-added co-ops among farmers. One example is activity in the small South Dakota community of Pollock. The farmers decided to organize the Pollock Area Dairy Cooperative, which is designed not only to market milk but also to run a local cheese plant that is currently at less-than-full capacity. Both

the residents of Pollock and surrounding farmers are interested in the co-op. The co-op will create additional jobs and provide farmers with an opportunity to sell milk more profitably and receive additional money from the cheese plant. The initial steps show hope for the future of the co-op. An informational meeting held a year ago brought \$17,000 in seed money to start the co-op. The city then received a credit of \$30,000 to the would-be co-op to purchase the site for the dairy facility (Johnson 1999, 6b).

## **Conclusions**

The future of the NGC movement depends on the future of agriculture in America and throughout the world. On the eve of the new millennium, agricultural techniques have come close to those of big industries (Saxowsky and Duncan 1998, 5-10). This means that technically, as well as economically, agribusiness may need to be run more like big industries. More success is expected when the entire chain of growing, processing to the stage of ready-for-consumption product, and marketing is integrated into a single unit—not only technologically but also economically. This means vertical integration will become the norm for farmers' co-ops. Even “old generation,” traditional agricultural co-ops are trying more vertical integration in food processing. Greater integration will provide co-ops with additional markets for products, will hopefully enhance their share of the consumer dollar, and will help them maintain the quality that leads to consumer acceptability of produced goods. One of the problems that may be difficult to solve in the near future is vertical integration of farmers' co-ops into food retailing. The extreme competitiveness of this business will make it hard for co-ops.

Many co-op leaders in the 1990s were well-aware of the necessity to develop value-added co-ops. As Jack Gherty, Land O'Lakes President, said, “We are operating in the most competitive and value-oriented economy in history. To be successful in this economy, business organizations—and cooperatives are business organizations—must continually improve their ability to add value to their products, services and people” (Adding value essential for cooperative survival 1993, 11). In the case of successful value-added co-ops, the benefits for farmers are clear: a share in processing earnings and facility ownership, improved market entry and development, access to additional production know-how, genetic sourcing, enhanced contract longevity, the availability of additional financial options, and increased insulation from market variations.

Farmers have two alternatives: (1) they can find profitable agreements with food-processing and retailing investor-owned corporations; however, that means the co-op has to surrender some control to so-called “big business”; or (2) connected with the development of an NGC. Farmers and residents in rural communities may be motivated first by a desire to preserve the social and economic fabric of rural America rather than merely to make money. That may be the core principle driving the NGC movement to further success in the next millennium.

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## **Golden Oval**

*by Patricia Buschette*

For decades, Renville, Minnesota was a community where egg production was a matter of housing 200 laying hens in a small frame chicken house. Farmers brought cases of eggs to town to the local egg buyer or co-op, their check often used in the local grocery store. However that picture of egg production in Renville, Minnesota, has changed. Since 1996, sleek silver insulated tankers with a distinctive yellow and blue Golden Oval logo travel from the Golden Oval plant in Renville, to locations as far as Canada, delivering liquid eggs to Golden Oval customers. How did this change happen? Quite simply, the world changed, and those who recognized change and its potential envisioned a new future.

### **History of the Renville Area**

Renville, Minnesota, is in Renville County, 120 miles west of the Minneapolis-St. Paul metropolitan area. Frank Svoboda (1976) in *Looking Back: A History of Agriculture in Renville County*, describes Renville County as a rolling countryside with a “rich, black clay loam” (22). The economic base of the City of Renville, organized in 1878, has always been agriculture. For years, farmers raised crops such as corn, flax, oats, wheat, and alfalfa. Later, flax and oats were phased out and soybeans were introduced in the 1950s. Much of this production went into on-farm animal production. Farm sizes changed as those traditionally ranging in size from 80-160 acres enlarged. Larger farm machinery had made it possible for producers to operate larger tracts. The decreased farm population and regionalized services had a negative impact on the Main Street economy and businesses suffered.

The economic well-being of the community, has traditionally paralleled the fortunes of the farm economy. The city had grown since 1930 when residents numbered 1,004. The general growth until the mid-1980s stopped when a drop in the health of the agricultural economy and farm expansion adversely affected the local economy. Main Street mirrored the effects of the countryside. Growth returned in the 1990s, however, and the population of 1,315 in 1990 had grown to 1,374 in 1997.

Renville is located on the Twin City and Western Railroad, a short line from the Twin Cities to the western edge of Minnesota. Formerly the Milwaukee Road and the Soo Line, the railroad has hauled the production of area farms to the centers of processing and further transportation. Farmers sold grain to the local co-op elevator, with future profits enjoyed by those who refined and processed farm commodities to develop a product closer to the tables of American and International consumers.

### **History of Traditional Cooperatives**

Minnesota’s lead in the development and participation in cooperatives has been recognized throughout the United States. This was not an unlikely development, since early settlers from

Norway, Sweden, Denmark, and Finland believed cooperative effort to be a way of life. From this understanding of the value of shared resources, traditional co-ops were formed. According to a Minnesota Experiment Station bulletin released in 1915, 614 creameries, 270 grain elevators, and 115 livestock shipping associations operated in Minnesota at that time. Co-op organizations provided stores, fire insurance, and telephone companies. Renville residents had organized more co-ops than any other county. These co-ops provided economic benefits to its members and to the community by providing goods and services at a competitive price, and returning profits to shareholders through dividends. One was a member of the co-op simply by doing business with it.

### **History of Value-Added Cooperatives**

One of the first local cooperative efforts to inspire area producers to seek new opportunities through a cooperative effort was Southern Minnesota Beet Sugar, a closed co-op formed by sugar beet producers. This co-op was formed soon after the American Crystal Sugar Company processing plant in Chaska closed. Farmers in west central Minnesota who had delivered sugar beets to the American Crystal Sugar Company as contract growers understood the value of this crop. In the 1970s, growers tried to develop interest in the development of a farmer-owned sugar producing co-op. In a 1997 book commemorating the early years of the Southern Minnesota Beet Sugar Cooperative, one of the co-op's attorneys, Michael Trucano (1997), explained the reasons why farmers worked to develop the co-op: "They were driven by a vision of creating economic opportunity in rural Minnesota that would stabilize their local communities and staunch the exodus of young people out of the area." While Trucano goes on to describe the economic success brought to the women and men who envisioned and built the co-op, the theme of his book returns to the issue of economic development for the community. The fledgling co-op suffered difficult start-up years. During construction of the factory, a strike of construction workers delayed production one year. The first year of start-up was hampered by inexperienced workers and a sugar mill flawed with construction defects that required adjustment. In the early 1980s, producers struggled with production challenges, including infestation of the *Cercospora* leaf spot fungus. Today, sugar beets are one of the most profitable crops grown in Renville County.

Following the development of Southern Minnesota Beet Sugar Cooperative, Minnesota Corn Processors (MCP) was legally formed in 1980. This corn wet milling company began construction in 1982 in Marshall, Minnesota, in the southwestern section of the state, approximately 50 miles from Renville. The plant began grinding corn in 1983, processing ethanol, starches, syrups, dextrose, feed, and corn oil. The members of this value-added co-op covered a nine-county area that processed nearly 120 million bushels of corn sold by producers as a cash crop in 1980. This value-added cooperative continued to grow, and in 1992 began construction of an expansion plant in Columbia, Nebraska. The members of the co-op were enthusiastic but faced setbacks in 1996. The effect of high corn prices and low profits were disastrous, and large cost overruns on expansion and renovation drained the co-op. The plant is now making profits, however, and is experiencing more prosperous times.

## Development of Golden Oval

Trends and changes in national agricultural economics have far-reaching effects and these impact on local business operations as well. The board and management of Co-op Country Farmers Elevator (Co-op Country) considered the makeup of the co-op membership. They realized that a large number of patrons would reach retirement age within a few years. At the age of 72, members would be eligible to receive a portion of their equity in the co-op. These payments of equity to retiring members and the estates of deceased members would diminish the co-op's operating capital. As a part of its long-range planning, management of Co-op Country anticipated the aging of farmer patrons. As the average age of patrons began to increase, they realized that the co-op would soon incur the liability of large equity payments. As a traditional co-op, the only form of income was the profit on the purchase and sale of grains and feed and agronomy services. Between 1989 and 1990, Dana Persson, then the CEO of Co-op Country, and the co-op's board of directors determined that the co-op required an additional source of income. This income would provide the capital for continued operation of the co-op, and the resources to meet the equity payments due to retired and deceased producers. Board and management explored ideas and set criteria for a value-added project. They agreed that the project could not be dependent on government subsidies. It must process crops grown by the member farmers and employ proven technology. The board considered the possibilities and decided to explore the feasibility of a swine project that would use part of the 28-35 million bushels of corn grown in Renville County.

The Co-op Country board then moved toward the development of an organization for the proposed new value-added co-op and any other co-ops that would be formed in the future. This co-op would serve as an umbrella organization for a series of new value-added co-ops through which area farmers could add value to crops they produced. While still on the drawing board, the new co-op was envisioned as a profit center for Co-op Country. Co-op Country would provide 40 percent of the capital and finance the remainder. Once the Co-op Country board had studied the possibilities for a swine multiplier unit operation, the board organized small group meetings with members of Co-op Country to determine the interest and support of the membership for the project.

The membership sent two messages to the board. Some members were opposed to the swine project because they believed such a project to be in competition with individual swine producers. The second message was that they supported the idea of a value-added project but proposed that the new co-op should be open to individual members as well as a Co-op Country project. The swine project was abandoned, and management and the board considered other options.<sup>1</sup>

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<sup>1</sup>While Co-op Country determined that they would not proceed with the swine project, members of the community who saw potential in shared effort joined together to form ValAdCo, through which local producers could add value to their corn through a swine project. ValAdCo began with 39 corn producers who built a 1,250 sow multiplier unit that by 1993 had grown to four sites housing 3,750 sows and their offspring. ValAdCo's goal was to add profit to the corn that members produce by producing breeding gilts and animals for market.

Alternative options included turkey and broiler production. However, after studying the options, egg production proved to have the greatest promise. According to Persson, the group studied the industry for 3½ years. “The cheapest dollars are spent in planning,” he explained as planners interviewed leaders in the industry to gain insight into the development and management in the egg production industry.

A start-up board was organized consisting of board members of Co-op Country, and the new value-added co-op was incorporated in the spring of 1994. It was known as Midwest Investors of Renville, Inc., the name of the umbrella organization. The name was misleading, however, and many who were unfamiliar with the co-op believed the organization to be a stock investment company. To avoid confusion, the new egg producing entity was named Golden Oval. Anyone who was an “at-risk” agricultural producer was eligible for membership. Membership in Co-op Country or other value-added co-ops was not a requirement, although many members of Golden Oval are members of Co-op Country and other value-added co-ops.

Once planners decided to proceed with an egg production facility, the start-up board managed the sale of shares. The group recruited Golden Oval members from the Co-op Country membership. They also sought leaders outside of the co-op to create interest and assist in a membership outside of Co-op Country. The marketing effort was successful and created the needed enthusiasm. According to Persson, \$4 million in investment funds were raised in thirty days. Shares at this initial offering were sold for \$3.50 a share. Along with the purchase of each share, members assumed the right and the obligation to deliver one bushel of corn each year. Persson believes that new investors were aware of the potential of value-added co-ops and were seeking an opportunity. The goal of the co-op is expressed in its mission statement, “To provide each farmer-producer, who is an owner of the company, a competitive return on their investment.” One of the members of Golden Oval is Co-op Country, who through its block of shares, successfully put in place a stream of income to augment its profit, to provide funds for future development, and to fulfill its responsibility of equity payments to retired members and to the estates of deceased members.

Once 1,140 shares had been sold, an election was held and a board of directors was elected from within the membership. The start-up board that had presided over the share offering was dissolved. As Persson explains, the City of Renville understood the economic advantages of the value-added co-op and aggressively worked with the co-op to assist. This assistance included availability of 40 acres of city property in its industrial park, as well as Tax Increment Financing (TIF).

Golden Oval began production in 1995 with one million laying hens and since then has increased production with an additional million laying hens. When the co-op’s management obtained contracts for liquid eggs, the co-op chose to sell only liquid product, in part because of its ease and savings in transportation. Under their uniform marketing agreement, the 411 co-op members deliver corn that is ground for feed and used for Golden Oval’s laying operation.

## **Feed Milling**

Early in the stages of the development of Golden Oval, a feed milling facility was constructed as a joint project by Golden Oval, ValAdCo, and Co-op Country. ValAdCo, the value-added co-op that had developed the swine project rejected by Co-op Country members, required increasingly greater amounts of feed for its hog production. Golden Oval's board knew that because of future expansion, the feed requirement would continue to increase. While 14,530 tons of feed were required in 1995, by 1996 that figure had grown to 51,791 tons and by 1997, usage had grown to 77,024 tons of feed. Local milling facilities were limited, however. A feed mill built in the 1930s by Co-op Country had been torn down, and a mill located in Olivia was only a few years newer and was slow and inefficient. A feed mill was needed not only to provide the feed for ValAdCo and Golden Oval, but for future expansion for Co-op Country. The present facilities were not sufficient, and future needs would require outside milling.

The leadership of the boards of Co-op Country, Golden Oval, and ValAdCo began discussions on how to meet increased feed requirements. According to Curt Watson, who represented ValAdCo, "We talked out disagreements," as the representatives struggled with issues as they arose. A difficult problem to be resolved was how to integrate the needs of a traditional co-op and two value-added co-ops. United Mills would deliver milled product to Co-op Country, who would, in turn, sell milled product to their customers. On the other hand, Golden Oval and ValAdCo used the grain for their own production. During the negotiation process, Persson suggested a variation on the group's philosophy. Rather than running the mill as a profit center, he proposed that it be run as a cost center. In such a scenario, the mill would be operated on a nonprofit basis. That is, there would be no profit in producing ground feed. Each of the three collaborators would receive the product at a cost basis. ValAdCo and Golden Oval would use it to feed animals being produced, and Co-op Country would provide milled product to customers, generating a profit.

The project was approved by the three boards, and organizers worked with the St. Paul Bank for Cooperatives, obtaining a loan to build the facility. Financing was supported by a TIF through the City of Renville and \$750,000.00 in equity advanced by the three participants. The total cost of the mill was approximately \$1.6 million. Currently, United Mills employs 13 Renville area residents, and processes 4,000,000 bushels of corn per year, equivalent to an annual process of 21 unit trains, each with 54 hopper cars.

Such a project had simply not been considered before, much less accomplished. While elevators merged with one another, and new co-ops were formed, the collaborative venture between a value-added co-op and a traditional co-op was a new idea. United Mills is governed by a nine-member board, three members each from Co-op Country, Golden Oval, and ValAdCo.

## **Golden Oval's Production**

Golden Oval's strategy is what the co-op refers to as a "Totally Integrated Food System." This system begins with a focus on the grain that shareholders produce for milling. Through the Differentiated Global Positioning Satellites (DGPS) system, members apply fertilizer effectively, enhancing the nutritional value of the grain that is used for feed. Co-op Country makes its agronomy department available to producers, making certain that the finest quality corn is grown for use in feed. The agronomy department does soil testing and has DGPS equipment available to apply crop nutrients to support the next crop. All grain produced by members is handled through Co-op Country Farmers Elevator, the grain handler for the co-op. Co-op Country tests the grain delivered and verifies that only quality corn is delivered to the feed mill. United Mills, the collaborative effort of Co-op Country, ValAdCo, and Golden Oval, mills and blends feed, providing a consistent level of quality grain for feed.

Because Golden Oval has a management contract with The Pullet Connection, the pullets are raised and delivered to the co-op from a single source, reducing the risk of disease. Through its contract with the owner of The Pullet Connection, Golden Oval has maintained the right to determine the rations and health programs of the pullets delivered to the laying barns at 16 to 18 weeks of age.

An important part of the integrated food system is the egg production. The laying barns are designed to provide comfort for the chickens and the workers. Outside air is pulled down from ceiling vents over the cages, providing circulation for the birds. This moving air continues down over the litter and is drawn out through fans. This process provides fresh moving air for the birds, and at the same time, dries the litter that has collected in the level beneath the cages. The litter is later removed for fertilizer, providing nitrogen, phosphorus, and potassium to area fields.

The environment of each of the 16 barns is monitored by computer that regulates movement of air and temperature. Water and feed for each barn is measured on a daily basis and is compared with the number of eggs produced. Veterinarians check the flocks every six weeks to ensure the health of the birds. An aspect of the co-op's efficiency is its in-line production system. Eggs that leave the laying barns travel by conveyor through a washing, breaking, and processing system. The linking of the laying barns with the breaking and cooling processes results in a savings of transportation and time.

From the barns the eggs move into an area where they are washed, candled, and inspected for breakage and cleanliness. One of the technological features of Golden Oval's production is the efficiency of the breaking process. Six egg breakers can break and separate 216,000 eggs per hour. A portion of egg production is shipped to food processors whole, while a portion is separated and then yolks and whites are blended to customer specifications. The quality of the egg product is maintained through a chilling process as it is pumped through stainless steel pipelines. Within a few minutes, the temperature of the eggs is dropped to approximately 35 degrees.

Much of the co-op's success is because of the quality of the egg that is delivered to grocery stores, restaurants, and kitchens. According to Persson, only six hours elapses from the time an egg is laid in the co-op's facilities, brought to the egg breaking facility, cooled, and put on the truck. The speed of this process results in a fresh, high-quality egg product. Trucks are sanitized before and after each load, assuring a safe, healthy food product. A USDA official oversees all aspects of the egg breaking and loading process.

Another segment of the Golden Oval system is the production of starter pullets. The co-op has contracted with Barb Frank, owner and operator of The Pullet Connection, to raise pullets that are delivered to Golden Oval. This farmer, who is a member of Golden Oval, redirected her efforts from crop production to the raising of pullets for Golden Oval. She contracts with Golden Oval to produce replacement birds and is paid on a per bird basis. The "closed system" that has been contracted between the producer and the co-op eliminates disease spread among other birds. Feed from United Mills is also used for this operation and as the feed source for the laying hens.

### **Golden Oval and the Community**

Farmer-owned co-ops have spent energy and resources in dealing with a negative philosophy that has resulted in nationally high environmental standards promulgated by the State of Minnesota. The management of Golden Oval has undertaken an aggressive program to maintain an environmentally sound facility. Rodents, mites, and flies are controlled through daily checks. Management has incorporated natural biological controls through beneficial insects that control unwanted insect populations. While Golden Oval has met state environmental standards, pressure from environmental groups continues, and the co-op now directs its expansion efforts to areas where political pressure is not as great. Because of neighborhood concern, an expansion of the present facility from 2,000,000 to 2,750,000 hens is being postponed, and the co-op is developing expansion facilities in Iowa. Golden Oval continues to strive to maintain a Good Neighbor Policy with its neighbors and the city. The efforts of the co-op to mitigate odor and fly problems is acknowledged, and the positive economic impact on the community is recognized.

The expansion effort into Iowa requires additional membership investment through the sale of additional equity stock and loans. New members will be expected to sign a Uniform Marketing Agreement that renews each year. Golden Oval is working through AgVentures, an association of farmers and agribusinesses in northern Iowa. Their goal is to develop value-added businesses and, in doing so, they are organizing informational meetings in Iowa allowing the co-op to explain the potential of investment.

### **Value to Members and the Community**

Dana Persson is candid about the motivation for the co-op and for individual members to join value-added co-ops. While the development of value-added co-ops is a source of economic development for the community, its prime purpose is to enhance profit for its members, he points out. Projects such as Golden Oval have received support from the local community, however, and through combined effort, have provided profit and growth for Co-op Country, individual members of the co-op, and the City of Renville.

Members of value-added co-ops share in the profit of the cooperative. The amount of profit is determined when expenses are deducted from sales. Based on the number of shares owned, members share in that profit. Co-op Country, as a member of the value-added co-op, has a large stake in Golden Oval and has shared in Golden Oval's profit of more than \$3 million. The 411 individual members also share in the profits, which in 1998 included a value-added payment for their corn. In that year, the average market price for corn at Co-op Country was \$2.19; however, Golden Oval members received \$3.77, or a value-added payment of \$1.58.

According to a report from the USDA Minnesota Agricultural Statistics Service, the average market value of agricultural products sold in 1997 in Renville County had increased 59 percent from 1992. Livestock sales accounted for 55 percent of the market value. The market value of agricultural products sold on an average per farm increased 86 percent from 1992. Neighboring Redwood County demonstrated a 36 percent market value increase with a market value of agricultural products sold increasing 46 percent in the same period. The development of value-added co-ops has affected livestock production in these two counties and has allowed producers to add value to the grains that they produce.

### **Golden Oval and Community Development**

The City of Renville and the surrounding area has profited from the development and operation of value-added co-ops such as Golden Oval. According to Persson, about \$14 million is spent annually in the operation of Golden Oval in terms of payroll, shareholder payments, feed, supplies, and other operating expenses. Local, state and federal taxes generated by the co-op total more than \$1 million, a significant portion of which is property tax used to support schools and local government. He also points to the health of Main Street Renville where businesses provide a full range of goods and services that include medical and dental services, two hardware stores, a grocery store, a pharmacy, two florists, and two restaurants. Renville businesses provide basic goods and services frequently unavailable in small communities. In some cases, competition between related businesses results in competitive pricing. A golf course opened in May of 1999 has added to the quality of life in the area. Golden Oval's contribution to the economy can be demonstrated through the co-op's employment of approximately 80 employees.

### **Success of Golden Oval**

Golden Oval is a success story, and according to its 1998 annual report, the co-op closed its fiscal year August 31, 1998, with 30 consecutive profitable months. In 1998, the co-op had produced more than 57 million pounds of eggs, an increase of 900,000 pounds from the previous year. Much of the success is due to the sound planning of board and management. Egg production of 7,156,819 pounds in 1995 increased to 57,180,658 pounds in 1998. Positive reports from the *American Journal of Clinical Nutrition* have resulted in increased egg consumption. Trends that include consumer habits of eating greater numbers of meals away from home and increased demand for convenience have bolstered the industry. The per capita

consumption of eggs has increased after a drop in the early 1990s. The low of 236 eggs per capita consumption in 1985 has now grown to 245.7.

The success of production, management, and marketing that has resulted in greater profit has created a gain in investors' initial investment. Share prices for members have fluctuated from the initial \$3.50 purchase price per share; they have sold from \$4.60 per share to as high as \$5.42.<sup>2</sup> This increase in value has resulted in a more positive balance sheet for producer members.

According to Delmar Mulder, Chair of the Golden Oval board of directors, value-added co-ops such as Golden Oval are an important component in the preservation of family farms. Now a proven investment, the only regret of some members of the co-op is that they cannot sell more corn to the co-op.

The lessons learned by Renville County agricultural producers are ongoing. The agricultural community has succeeded in organizing and operating value-added co-ops, and whether motivation is for personal profit or for community development, both the community and producers have benefitted. There are hard lessons to be learned in risk management, and while effort never guarantees success, value-added co-op members believe that failure is often the result of inaction. This understanding that cooperative effort has the potential for success has resulted from years of experience. For others who have not worked through the challenges and for whom this experience is not first-hand, the lessons may come more slowly.

A fragment of resentment of certain aspects of co-ops such as Golden Oval remains with some who often are opposed to value-added co-ops. According to Lee Egerstrom (1994), a writer for the St. Paul Pioneer Press, opposition is found in those anxious about the sociological and environmental issues, and others whose philosophies are difficult to identify. Egerstrom believes that many of these are the "well-intentioned advocates of a family farm image who want to perpetuate a peasant society that has disappeared from the landscape, but not from agrarian myth" (40).

Projects such as Golden Oval give producers a reason for pride as they find that they have the potential of taking control of their future; however, such projects do not come easily. Planners must do their homework and consider the opportunities and the challenges of each project. A level of independence that was enjoyed by the early co-op members of Renville County is now balanced with the understanding of the value of cooperation, as producers work together, utilizing a desire to succeed, hard work, and a vision of success for themselves and their communities.

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<sup>2</sup>This price is based on a per bushel price, and purchased and sold on a 1,000 bushel basis, to \$3,500 for a 1,000 bushel contract.

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# **Going Against the Grain: The Story of the Mountain View Harvest Cooperative**

*by David Carter*

## **Introduction**

The packaging room of Gerard's French Bakery near Longmont, Colorado, hums with activity these days. The aroma from 14 Revert Ovens fills the large room as workers in hairnets and bakers' white uniforms fill cases with freshly cooled loaves of peasant bread, cracked wheat sourdough, parmesan cheese rolls, boules, and three-foot long sandwich rolls.

It's a scene similar to the activity in hundreds of bakeries throughout the United States each day, but this one is different. The owners of this bakery do not just supply the capital for operations, they also provide the wheat flour used in every loaf of bread. This is a dream fulfilled for the wheat farmers and their families who donned crisp, white baker's aprons in May 1997 to pose for a photo around the sign of the bakery they had just purchased. It was a dream that grew from a vision held by a small band of producers struggling to salvage a failed co-op in early 1994.

Raw determination, careful planning, and good fortune served as the recipe followed by the producers as they organized the Mountain View Harvest Cooperative (MVHC) over a three-year period and then generated \$5 million in equity to purchase a state-of-the art bakery facility.

The farmers who chartered and capitalized the MVHC plowed new ground in the cooperative development arena. Not only did they pioneer the movement into value-added production in the Rocky Mountain region, they also established the nation's first major farmer-owned bakery (Senechal 1995a). These wheat farmers had generated the \$5 million in equity needed to establish the bakery largely because they expected to earn a return on investment by moving forward in the food chain. This wasn't just another business to most members. This was, at last, an opportunity to maintain a degree of ownership and control as wheat flowed from the farm gate to the consumer's table. As one producer later noted, "I always wanted to see my customer."

"Field to table," "seed to sandwich," and other catchy phrases have been coined to describe the modern, vertically integrated marketplace. "Seeing our customers" connotes something more significant. It depicts an actual marketing relationship among agricultural producers and food consumers.

Farmers' common lament that "Consumers think that food comes from the grocery store" captures the frustration that many producers feel about the lack of understanding today's customers have about the realities and rigors of American agriculture. The phrase also has a flip side. Most farmers do not know what happens to their commodities after delivery to the local grain elevator. Some wheat gets shipped to domestic flour mills and food factories. Some flows into the international marketplace. The farmer only knows that someone else, somewhere else,

earns the lion's share of profits in the American food system. Farmers today account for less than 6 percent of the gross domestic production of the food and fiber sector. Processing, marketing, and input supplies obtain the remaining 94 percent (USDA 1998, 1). In chartering Mountain View Harvest and purchasing Gerard's Bakery, 225 Colorado wheat farmers were determined to capture a share of that value-added profit.

### **Genesis of an Idea**

The seeds for the MVHC were sewn among the rubble of a bankrupt Colorado grain merchandising and feed milling co-op in 1994. Farmers Marketing Association (FMA) served the Rocky Mountain region as a viable grain handling and feed milling co-op since 1942. The co-op had experienced a series of unfortunate circumstances in the 1980s. A feed mill fire, a disastrous drop in livestock feed demand, and derailment of a shipment of grain in 1988 triggered events forcing FMA to seek protection under Chapter 11 reorganization the same year. As a result of the bankruptcy, FMA's three elevators were sold to Cargill (Carter and Lauridson 1994). Cargill's purchase of the FMA elevators was the opening salvo by the Minneapolis-based corporation in a major program to acquire grain merchandising facilities in Colorado. By 1989, Cargill owned 82 percent of the grain elevators in Colorado capable of loading unit trains (Nyberg 1992).

Colorado wheat farmers began to complain openly about the erosion of marketing alternatives for their crops. Even as the FMA board struggled to handle the co-op's reorganization, they began to dream once again about reestablishing a presence in the grain market.

Reggie Wyckoff and Tom Lauridson, two producers on the FMA board, began to study co-op development successes in North Dakota. They were especially intrigued by the rapid growth of the Dakota Growers' Pasta Company in Carrington. Wyckoff and Lauridson also noticed that the Rocky Mountain Farmers Union (RMFU) had recently begun to promote the idea of co-op development as a way for producers to regain more control over agricultural markets in the west (Wyckoff 1995).

Producers attending a series of "Community Forums" conducted by the RMFU in 1994 expressed a strong desire to develop new locally based enterprises that provided viable, tangible marketing alternatives. Co-op development emerged from those forums as a tool for producers to accomplish that goal.

Meanwhile, the FMA board met in May 1994 to generate ideas for reviving the grain marketing co-op. Most of the discussion centered on traditional grain marketing ideas. Value-added processing was discussed only briefly. Participants agreed to enlist the RMFU's assistance in exploring all ideas for emerging from Chapter 11.

### **Early Leadership**

In discussions conducted through the summer, Wyckoff and Lauridson began to steer the dialogue toward an emphasis in value-added processing. They were an unlikely duo. Wyckoff, a

dark-haired wheat farmer from Colorado's eastern plains, had devoted a lifetime to the Colorado wheat industry, had been active in the Wheat Growers' Association, and had served as the National Association of Wheat Growers president in the 1980s. By contrast, Lauridson, a tall, gregarious young farmer, had been struggling to maintain a viable wheat operation by tenant farming for a series of landlords in Colorado's rapidly urbanizing Front Range. The conservative, soft-spoken Wyckoff and the liberal, outspoken Lauridson were united by their dogged determination to revive the flailing farmer-owned co-op.

As FMA and the RMFU began to collaborate on the planning, Carter, as president of RMFU, was invited to serve on the co-op's Board of Directors. Ideas were abundant throughout the summer. Discussion ranged from producing specialty flours, and organic wheat products to nonfood items such as fiberboard and insulation. The first task was to secure adequate funding to explore the feasibility of these alternatives. From the board's study of the North Dakota co-op, they knew the feasibility study might cost as much as \$100,000. Lauridson got the chance to personally request that funding from the U.S. Department of Agriculture (USDA) in September 1994.

### **Testing the Feasibility**

Participating in a RMFU legislative "Fly-In" that month, Lauridson was among about 15 ranchers and farmers who met with Michael Dunn, administrator of the USDA's Farmers Home Administration, to discuss an array of agricultural credit issues. He explained that the FMA was working to restart the co-op, and noted that the FMA board would be submitting a proposal for funds to investigate processing and marketing alternatives for Colorado wheat producers.

Dunn indicated that FY94 federal funds were still available to fund that type of feasibility study; however, Dunn added, the grant proposal would have to be delivered within 24 hours because of the impending close of the fiscal year. That evening, Lauridson and Carter "borrowed" the National Farmers Union's Washington, DC office to finalize that grant proposal. With FMA's manager Gene Bevill furiously faxing material from Denver throughout the night, Lauridson and Carter worked to meet the complex criteria for the USDA funds. A formal grant proposal was hand-delivered to USDA the following afternoon. Approval of the grant request the following month provided organizers with vital capacity to engage qualified professionals to assess the feasibility for value-added wheat processing.

Following a brief bidding process, FMA engaged the Massachusetts-based firm of Senechal, Jorgenson, and Hale to conduct the feasibility analysis. Senechal had extensive experience in the food processing and retailing industry, and had carved out a niche during the past decade working with the value-added co-op sector. The feasibility study was conducted in two phases. In the first phase 14 alternatives for merchandising and processing Colorado-grown wheat were analyzed. Ideas examined included grain merchandising, ethanol production, wheat gluten manufacturing, snack products, tortillas, pizza dough, frozen bread dough, and other bakery products.

Each alternative was evaluated based on anticipated volume, profitability, risk, expected market growth, capital requirements, and existing competition. The alternatives were given a green light, yellow light, or red light score under each evaluation factor. Alternatives indicating a high degree of potential would be analyzed in greater detail during a second phase (Senechal 1995).

FMA's traditional business line as a delivery and merchandising elevator was quickly dismissed in the study's first phase. That business emphasis, commonly known as grain origination, was identified as a mature industry with low margins, which is dominated by a handful of transnational corporations.

Flour milling and cereal manufacturing were also tagged as a mature industry with low margins, high capital costs, and significant barriers to entry. Ethanol production and wheat gluten production were considered to be extremely risky because those industries depend upon unpredictable government policies. Wheat gluten, for example, is a byproduct of starch production. According to Senechal, the European Union processes significant amounts of starch but has not developed markets for the gluten by-products. The impending passage of the General Agreement of Tariffs and Trade increased the risk that European gluten would be dumped on the world marketplace.

The alternatives of bakery products, pizza crust, and tortilla manufacturing all indicated relatively high degrees of potential success. The in-depth analyses of these alternatives included an overview of industry factors such as market segmentation, growth rates, competitors, and likely outlook. Senechal (1995b) also developed a series of pro forma financial statements, complete with a sensitivity analysis and a risk/return trade-off assessment.

### **Choosing the Bakery Alternative**

After a series of meetings with Senechal, the FMA board determined to pursue a proposal to produce specialty bakery products. According to Senechal's research breads and rolls dominated the bakery industry, accounting for more than \$12 billion in sales, and for 47 percent of the consumption of all baked goods in 1994.

While the overall volume growth in the industry was relatively flat, specific sectors were growing while others were declining: "In dollars, the market has been growing steadily, while volume figures show a market that is relatively flat. This suggests that prices have been rising and/or the market is turning toward higher value products such as variety breads and frozen bread products" (Senechal 1995b).

One small, but growing, segment of the market targeted by Senechal was the area of producing parbake products for the food service industry and for supermarket in-store bakeries. Parbake is a product that is baked to approximately 85 percent of completion and then is flash-frozen to preserve freshness. The end-user fresh-bakes breads by simply thawing the product and completing the baking process.

The study noted that parbake products were well-positioned to benefit from the shifting dietary habits of modern consumers. More than 75 percent of all grocery stores had in-store

bakeries in 1993. That percentage was expanding rapidly as grocery stores focused upon the food category known as Home Meal Replacement. Even so, scarcity of trained labor was listed as the number one concern of all supermarket in-store operators (Senechal 1995a). Consumers have also indicated that they will make significant shifts in their bakery purchase patterns to in-store bakeries and away from the commercial bakery rack in supermarkets (Bakery Production and Marketing 1996).

Several major obstacles were evident in the initial feasibility analysis. First, Senechal estimated that construction of a new parbake facility would require \$26 million in capitalization, of which \$11 million would be provided as an equity investment by growers. The study also projected that a bakery of this size would use only 349,000 bushels of wheat annually. “You can make a lot of bread with a little dab of wheat,” Senechal reported to the FMA Board of Directors (Wyckoff 1995).

The FMA board estimated that no more than 500 Colorado wheat farmers were potential investors in a value-added wheat co-op of this scope. Board members began to seriously question the ability to convince 500 growers to invest \$22,000 each in a venture that would not even use the wheat grown on 20 acres apiece.

The concept of parbake bread manufacturing marked a dramatic departure from FMA’s traditional expertise in the grain handling and feed milling businesses. Senechal suggested that FMA could address these factors by developing a partnership agreement with an existing industry player in the parbake business. Acting on the study’s recommendation, the FMA board entered into negotiations with a New York-based industry leader in October 1995.

The FMA board was far from its expertise in conducting negotiations of this nature. The proposed business arrangements were extremely complex. In addition, the time commitment required to move this project through the next phases exceeded the abilities of the volunteer board of directors.

Rocky Mountain Farmers Union ’s for-profit subsidiary had recently helped organize a limited liability company operating under the name of Rural Business Ventures (RBV). The principals of RBV included a Certified Public Accountant, an attorney, and a Merrill Lynch investment advisor. The RMFU for-profit subsidiary authorized a \$25,000 interest-free loan to FMA to fund the work of RBV in assisting in the negotiations with the New York company.

### **Weathering the Storm**

The months from December 1995 through July 1996 marked a stormy period in the co-op formation period. Much of that storm raged inside the FMA boardroom. The FMA board chairman was a western Colorado rancher who had joined the co-op years ago because of FMA’s feed milling business. Although he supported the movement into value-added production, he knew that the “new” co-op would primarily serve the farming community, not ranchers. He stepped down from the board in December 1995.

The chief executive officer of FMA balked at the value-added concept. He was convinced that export marketing of bulk, identity-preserved commodities represented the best future for

reviving FMA. He also resigned in December 1995. The remaining board rallied behind the value-added parbake concept, sometimes referring to the project as “the half-baked co-op,” wondering at times if the idea was in fact half-baked.

Negotiations with the New York company began to flounder. The RBV consultants analyzed the company’s various proposals, determining that each placed the fledgling Colorado group at a serious disadvantage. Several offers amounted to little more than a “preferred provider” arrangement for marketing the wheat of participating Colorado growers to the New York company.

### **A Critical Juncture**

By July 1996, the project had hit a dead end. The prospect of generating \$11 million from Colorado growers for a new facility seemed insurmountable, and the negotiations with the existing industry player were going nowhere. Justin Eisenach, the investment advisor consultant with RBV, had located two Colorado bakeries that might be available for purchase by a cooperative of wheat farmers. One of those bakeries was already moving into the parbake arena.

The months of negotiations with the New York company had taken its toll. The board had met as often as every other week. So far, there was little progress to show for the effort. Energy was rapidly ebbing among the small core of dedicated board members who had driven the project with the assistance of the RMFU and the RBV consultants. Any chance of moving forward would require renewed energy from a wider circle of wheat producers. After all, the co-op board of directors had made assumptions about the desires of Colorado’s wheat producers for more than 18 months. It was time to test those assumptions.

Project organizers held a dinner meeting in eastern Colorado in July 1996 and invited a small group of leading area wheat farmers to review the status and outlook for the project. The 14 farmers attending the dinner meeting in Limon listened as Wyckoff, Lauridson, Eisenach, and others reviewed the developments of the past 18 months. They discussed the feasibility analysis, reviewed the failed negotiations with the New York company, and forwarded the idea of exploring the purchase of one of the local bakeries.

Several producers at the meeting supported the idea of investigating the purchase of a bakery, but they felt that the FMA structure added too much “baggage” to any economic development plan. After all, the co-op had struggled through eight years of bankruptcy and still listed many farmers among its list of creditors.

### **Mountain View Harvest Cooperative Comes to Life**

The group agreed that evening to completely restructure the project. While four FMA board members—including Wyckoff and Lauridson—continued to serve on the steering committee, five new members brought new perspectives and fresh energy to the project. The new group agreed to move forward under the name of Mountain View Harvest Cooperative. The project was energized once again, and a flurry of activity unfolded during the next five months.

Legal documents were drafted formally establishing Mountain View Harvest Cooperative. One of the documents was a membership subscription agreement, which requested \$500 from interested producers. That money was dedicated solely for the purpose of funding the co-op's formative process.

Initial inquiries were made with the owners of the Colorado bakeries. The owner of Gerard's French Bakery near Longmont indicated some interest in selling his business to a group of Colorado wheat producers. This triggered a series of negotiations that led the committee into some uncharted waters in co-op development.

Most co-op development efforts center on a brand-new business. Federal agencies and co-op lenders were accustomed to projects that propose green field construction or that purchase a facility with the intent to convert it to a new co-op enterprise. This situation was different.

Colorado wheat farmers were offering to purchase a bakery with an existing customer list and established annual sales of \$6 million. The Colorado wheat producers were interested as much in the owner's customer list as they were in the physical assets of the bakery, which was much smaller than the enterprise recommended in the Senechal feasibility study. While the smaller size reduced the amount of capital needed by the Colorado producers, it also reduced the potential earnings that could be distributed among a large group of investors.

Eisenach and a CPA working through RBV developed a business plan around the idea of a farmer-owned co-op purchasing Gerard's French Bakery. The plan indicated that co-op ownership was feasible if the bakery engaged in an aggressive growth campaign in order to generate patronage dividends necessary to entice adequate grower interest.

Intensive negotiations were conducted with the bakery owner. He agreed to sell the business operations and the equipment for \$6 million; however he wished to retain ownership of the physical facilities. That figure represented one dollar in purchase price for each dollar in annual sales. The co-op would have a ten-year lease, with two five-year rights of renewal on the building.

### **Financing Poses a Challenge**

This agreement limited the steering committee's access to financing. Co-op lenders wanted to have physical assets as collateral against loans. Financing discussions became entangled with disagreements over the issue of financing the "blue sky" value of an existing business.

When the steering committee and the bakery owner settled on a purchase price of one dollar for each dollar of sales, the co-op lenders balked. Financing appeared unattainable. The owner, however, said that if the farmers could generate \$5 million, he would carry the balance of the purchase price.

The business plan was revised, and reanalyzed, in light of this scenario. The new plan underscored the need for an aggressive growth strategy. The steering committee knew that the maximum target audience for this project was approximately 500 commercial wheat producers who were active in either RMFU or the Colorado Association of Wheat Growers. Not all of these

farmers were likely to invest in a project, however, so the committee decided to try to recruit 400 wheat producers.

Several factors complicated efforts. The bakery's flour consumption equaled less than 200,000 bushels of wheat. One large wheat producer could supply all of the company's annual flour needs. Eisenach (1999) explains, "We knew that there were other projects that would utilize more wheat. But we felt the parake end of the bakery business offered excellent potential for success. We determined that, if we succeeded with a small operation, we could use that business as a platform to move into other areas that would use more wheat."

Milling the wheat into flour also posed a problem. Wyckoff knew that the new co-op had to be able to control the quality of the product from the farmers' bins to the bakery; however the only major flour milling company in Colorado was owned by one of the corporate giants already entrenched in the baking business. There was a consortium of local farmer co-ops which had organized Rocky Mountain Flour Milling, a limited liability company (LLC), for the purpose of constructing a flour mill in the nearby community of Platteville. That flour mill, however, was targeting the organic flour market. Negotiations with the Platteville mill determined that the facility could handle conventional wheat, as long as the equipment was cleaned between runs of conventional flour and organic flour.

The next problem arose with delivery of wheat to the co-op. Project organizers knew that if farmers were required to supply the high-quality wheat needed by the bakery, they must be able to deliver at least one truckload each year. The board located a grain elevator facility for sale near the flour mill which was for sale. The facility was old but in working condition. The owner offered to sell it to the new start-up group for \$160,000.

After months of wrestling with the problem, the committee finalized a proposal to purchase the bakery and elevator for a total of about \$6.5 million, with \$5 million coming in the form of a producer equity investment. Farmers joining the new co-op would be obligated to deliver a truckload of wheat (900 bushels) to the co-op each year. The best wheat would be segregated, and the remainder merchandised on the open market. The segregated wheat would be transported to the Platteville mill to be processed into flour, thus meeting the bakery's specifications.

The committee determined to sell 400 shares in the co-op for \$12,500 a piece, with each share carrying an obligation to deliver 900 bushels of wheat to the co-op each year. Wheat would be purchased by the co-op at the market price, but investors would expect to earn a return on their equity investment in the new co-op.

But how many farmers could afford to pay \$12,500? According to Eisenach (1999),  
We needed to make investing in this new co-op as easy as buying a new pickup truck. So, we started working on a GMAC-type investment program for co-op shares. The Farm Credit System stepped forward to work with the steering committee to devise an equity investment financing plan. Qualifying producers could obtain a five-year signature loan to purchase shares in the new co-op.

## **Equity Drive Launched**

With a prospectus developed by the consulting attorney and a briefcase-full of solicitation materials, Eisenach, Wyckoff, and other members of the steering committee launched the equity drive in November 1996. They conducted a whirlwind tour of 63 meetings over the next four months of groups ranging from 2 to 20 individuals. By March 31, 1997, the last share of stock was sold. While only 225 producers had joined the new co-op, several had purchased more than one share of stock. Eisenach had worked on MVHC nearly full-time since July 1996. He now agreed to serve as chief executive officer for the co-op. With the necessary equity in hand, the producers completed the purchase on April 15, 1997. One month later, the co-op's initial annual meeting celebrated the purchase of the nation's first major farmer-owned bakery.

Gerard's French Bakery has experienced 35 percent annual growth in the two years following that purchase. The rapid growth has required the co-op to plow revenues back into the business. A \$140 per share dividend was distributed to the members at the end of the first fiscal year. Earlier this year, the board conducted a series of seven "Members' Update" meetings with stockholders throughout the state. Members attending the meeting agreed to forego a dividend in the current fiscal year to capitalize the purchase of additional processing and packaging equipment, as well as to invest in expanded freezer capacity.

Additional customers and expanded sales to existing clients pushed the sales volume above \$1 million for the month of June 1999. The expanded sales pushed the bakery's profitability above the break-even level required by the new capital investments.

Though no formal market exists for trading stock in the co-op, the bylaws require the board of directors to approve each transaction as a means to assure that the cooperative remains in the hands of active producers. The most recent shares of stock have traded for \$15,000 per share.

## **Factors for Success**

The following factors contribute to the ongoing success of Mountain View Harvest Cooperative:

- The producers purchased an ongoing, successfully operating business. The new co-op was spared the trials of wading through green field construction, initial market penetration, and other factors associated with many start-up businesses.
- The co-op retained the existing management. All of the key employees stayed with the bakery during the transition. Those employees were offered an opportunity to purchase stock in the bakery, thus sharing in the risks and rewards of ownership.
- The co-op brought in new expertise from the industry. When the board moved to hire a national sales manager and a production manager, it sought individuals with industry experience. MVHC successfully located experienced personnel with large industry leader bakeries, who were excited about the prospect of joining a feisty, growing company. The new national sales manager brought contacts with major retail outlets

across the nation, while the new production manager built his career with a major company on a specialized knowledge of unique variety breads.

- The board navigated a difficult transition period. As the project transformed from an organizing effort to an operational business, the board changed its role from that of a steering committee to a formal board of directors. Two wheat producers on the steering committee stepped aside at the outset, allowing the members to elect two new directors at the initial annual meeting. During the next year, two other directors, including Wyckoff, resigned from the board. The board established a vacancy committee to select new directors who could bring solid experience in the wheat marketing industry. One director brought with him an extensive background in private industry, and another had served as the executive director of the Colorado Wheat Administrative Committee since the early 1980s.
- The co-op's rapid success with the bakery created an immediate need for new equipment and other capital improvements. The addition of cryogenic tunnel freezers, the construction of additional loading docks and freezer space, and the purchase of other packaging equipment increased the co-op's fixed costs and, thus, pressured the short-term bottom line.
- The grain elevator purchased by the co-op served as a drag on the bottom line. The facility was in worse shape than at first thought. The steering committee had relied on the judgement of one of its members to determine the elevator's viability. In the rush of finalizing the purchase agreements, other steering committee members failed to conduct adequate analyses. Extensive repairs of the elevator's handling and storage equipment were required to keep the facility operational. Maintenance of the elevator drained capital and management resources from the bakery. In early 1999, the MVHC Board of Directors negotiated an arrangement with Rocky Mountain Flour Milling to handle direct wheat deliveries at their facility. Rocky Mountain Flour Milling agreed to provide MVHC exclusive use of a couple of their storage bins at the flour mill. The arrangement included assurances that the wheat from the co-op's members would not be blended with nonmembers' wheat. Because of the new agreement with Rocky Mountain Flour Milling, the board was able to lease the elevator to a private business.

### **Early Results**

Mountain View Harvest Cooperative is now entering its third full year of operation as a bakery. The growing pains inflicted by rapid growth have subsided as sales climbed above the break-even mark. Total sales for FY99 are projected to exceed \$12 million, and Gerard's was selected as a recipient of the 1998 "Ten That Can" award presented each year by the Colorado Office of Economic Development.

Return on investment in the co-op has not yet matched the returns producers could have anticipated in the stock market. Even so, participants in the venture seem enthusiastic about their success in establishing ownership in a growing segment of the food processing sector.

In fact, Eisenach (1999) notes, “When we went out to visit with shareholders about the need to retain our earnings to capitalize growth this year, we anticipated that some shareholders might have wanted to sell their stock. Instead, we came back with an increased waiting list of producers wanting to buy new shares. Our members believe that we are in the right business, at the right time.”

“We haven’t yet made the 30 percent returns we’d like to make,” stockholder Jay Wisdom (1999) told a recent gathering of producers investigating another type of value-added co-op. “But I figure that the two shares of stock my family bought were about the equivalent of a new pickup truck. By now, that pickup would be pretty well depreciated. But my stock in Mountain View has appreciated by 20 percent.”

As Colorado’s wheat farmers look toward the uncertainty of commodity prices for their crops, 225 producers now know that they have successfully developed an ownership stake in a higher, more profitable level of the food production business.

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## **Case Study of Southwest Iowa Soy Cooperative**

*by Norman Walzer and Mary Holmes*

Depressed crop prices leading to lower incomes for farm producers across the United States have motivated many groups to organize in an effort to improve the financial conditions for farmers. The numerous approaches that have been attempted typically include finding new markets for current products, sometimes through niche marketing using an identity preservation technique. In other cases, farm producers have tried to reduce operating costs through joint purchasing or marketing efforts. Still, other producers have tried to obtain economies of scale by increasing their size of operation through the purchase or rental of additional land.

The specific approach adopted to increase farm incomes depends partly on historical trends, industry structure, market conditions, and the types of products grown in the region. In the Great Plains and Upper Midwest, producers have had a history of forming cooperatives to lower input costs and market output. Many of these cooperatives were formed in the early 1990s, sometimes to bring better services to rural areas. In some cases, the cooperatives then moved on to provide services beyond their members and even, at times, compete with the membership in service delivery.

The 1990s brought a new type of cooperative movement, which focused on adding value to farm products before they left the producers' control. These arrangements, New Generation Cooperatives (NGCs), are used in raising fruits and vegetables, corn, soybeans, and livestock. They typically are very different in structure and are unique in product and delivery. A common feature, however, is that their mission is to capture a greater share of the profit in the food chain, namely to bring producers a larger share of the profit from raising and delivering agricultural products.

This case study examines an effort in central Iowa to build an NGC based on processing soybeans into soybean meal and oil with the final products destined for animal feed. The NGC is still in the early stages and has faced some difficulties reaching the expected market. At the same time, it has been limited by a decline in the expected crush margin. In subsequent analyses, we examine approaches used in creating this NGC and try to identify some of the obstacles that were overcome and those that remain to make the effort profitable.

### **Background<sup>1</sup>**

The Southwest Soy Cooperative (SSC), located in Adams County, Iowa, grew out of the general discontent with soybean market prices and a desire to stabilize farm incomes in 1995. Adams County is a rural area located 30 miles north of the Missouri line and 65 miles east of the Nebraska line. The nearest major markets for soybeans grown in this area include Omaha (80

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<sup>1</sup>Much of this material is based on a feasibility study which was prepared by Jeff Jobe, USDA-RD, Rural Business-Cooperative Specialist, in 1996. That information is supplemented by personal interviews with Ray Gaesser, Roy Parsons, and Ken Pangburn which were conducted in July 1999.

miles west), Manning, Iowa (90 miles north) and Des Moines, (110 miles northeast). In addition, other smaller processors were setting up operations in the area surrounding Adams County. Previously, the markets were dominated by large conglomerates.

Against this setting of low prices and somewhat limited markets, the Raw Agricultural Products Committee (RAPC) of the Adams County Economic Development Corporation was created in 1994 to find ways to increase the profit stream from local crops. Several options were considered including raising and cleaning corn to make it food grade, raising horticultural crops, and initiating a large feed lot operation to expand markets for local products. Concerns were raised about some of the problems that had been experienced with large livestock operations, so attention shifted to processing soybeans into cattle or hog feed since livestock is an important industry in the area. For instance, Iowa leads the nation in hog production and is a major exporter of beef. In 1995, the RAPC recommended further exploration of a plant to process soybeans into a meal for animals and into an oil with multiple commercial and industrial uses. In October 1995, the RAPC requested that the U.S. Department of Agriculture-Rural Development (USDA-RD) undertake a feasibility study of this type of business and make recommendations regarding an organizational structure to bring it about with a goal of raising the price of soybeans by \$1.00 per bushel for members.

### **Operational Feasibility**

Undertaking this type of venture involved leadership from five key individuals, including producers and businesses who owned land, with moral and financial support from others in the area. From the start, the venture was seen as a local economic development project, which involved support from local financial institutions as well as producer members. There is a history of co-ops in Iowa and neighboring states such as Wisconsin and Minnesota; however, it was a new experience for those involved in this specific endeavor.

The feasibility study, prepared by Jeff Jobe, clearly demonstrated the potential for profitability of the proposed activity, but it also indicated that the profit margin could be negatively affected by many factors including crush margin (difference between the price paid for soybeans and the price of soybean meal and oil produced). Likewise, to be profitable, the NGC had to market its output well and reach a specific volume of production. Informed local management was also identified as crucial to the success of this venture. Several sensitivity analyses were undertaken to illustrate the importance of these factors. Elements such as costs of inputs, management structure, and markets are not unique to this endeavor. Virtually any business operating on a relatively slim margin must pay attention to them as well. Because of their importance to others considering this type of effort, some time is spent on each element below.

### **Soybeans as Inputs**

The SSC idea centers on Adams County but also recognizes the surrounding seven counties as potential suppliers of soybeans. Building on assets of the region, especially as local inputs, is important to the success of this venture. Approximately 18.7 million bushels of soybeans are

produced in Adams County and the surrounding seven counties annually, with 1.8 million bushels produced in Adams County alone according to Jobe's 1996 feasibility study.

Producing soybeans is not the issue; retaining the income on the farm is the bigger question. Jobe estimates that 40 percent of the soybeans in Iowa are exported without further processing. If value is added to the soybeans, it mainly comes from feeding livestock and marketing the animal products. In 1996, Jobe estimated that 68.8 million bushels of soybeans were consumed by livestock as soybean meal, and this meal was processed at 24 existing facilities.

The issue that faced the potential investors in the soybean processing cooperative, then, was how to organize and create a facility that could further process the soybeans and allow farmer-producers to capture a share of the income generated from this processing endeavor. At the same time, if the venture created jobs, residents in nearby communities could gain. It was clear from the beginning, however, that a large number of full-time jobs would not be created in this type of venture. Nevertheless, if the farmer-producers received higher incomes from soybeans produced, the additional income would be spent locally thereby stimulating the economies of surrounding communities. Thus, local business leaders and financial institutions had reason to invest in this type of venture, and, in fact, the venture was supported by both financial institutions and commercial business interests.

## **Structuring the Business Venture**

There are two ways in which farmer-producers in this type of venture can earn additional income. First, they can receive a premium for the grain supplied to the co-op. A premium for producers, of course, means higher input costs to the business venture than would have occurred if the soybeans were purchased on the open market. The premium, however, provides an immediate benefit to co-op members and offers an incentive to join the overall effort.

Second, members of the co-op share in the returns from the enterprise if it makes a profit, or may have to make additional financial contributions if the venture does not meet expectations. Assuming profitability of the co-op, members will receive a return on their investment. This return depends on the profits which, in turn, depend on accessing lucrative final markets and keeping the production process as close to the final consumer as possible.

The soybean processing plant uses an Insta-Pro (R) extrusion-expelling process<sup>2</sup> to convert the soybeans into a meal and extract the oil. A detailed description of the precise process is not needed here, but the extruder "generates heat through friction to cook, sterilize, stabilize, texturize, and dehydrate the soybean" (Jobe 1996). The process creates a high-quality animal feed with a high fat content that is readily accepted by animals as a protein supplement.

Extruded-expelled soybean meal contains 45 percent crude protein and 7 percent crude fat. The extruded-expelled meal is produced by an environmentally sound process that does not require solvent extraction of the oil. Through this process, the meal does not assume the bitter taste typically associated with the solvent-extraction process. The meal is a golden color with a

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<sup>2</sup>Manufactured by Insta-Pro International, 10301 Dennis Drive, Des Moines, IA 50322.

low moisture percentage. It is typically used to replace conventional soybean meal and some of the fat in any diet. It is ideal for pig starter where a low level of antinutritional factors are required. It is also an ideal source of the bypass amino acids required for milk production.

A 1994 study conducted at Kansas State University concluded that nutrient digestibilities and availabilities of indispensable amino acids tended to be greatest in extruded soybeans. The Insta-Pro extrusion process was compared with conventional soybean meal and roasted soybean meal.

## **Potential Markets**

Initially, the SSC targeted pork producers as a main market for the soybean meal as a protein supplement. According to Jobe (1996, 12), the soybean meal contains 7 percent fat making it a high energy supplement which represents a 44-46 percent protein supplement. Iowa is number one in the nation in pork production at 5.35 billion pounds of pork processed in 1997.

The intended market radius was approximately 40 miles wide with an expected 500 to 700 potential hog producers. The revised market is 70 to 80 miles from the production point. SSC has a production goal of 400 tons of meal per month and understands that, with recent consolidations of hog production, growth in markets must come from dairy production, and efforts have been directed to those customers. Thus far, in the Midwest, the dairy operations have not followed hog production patterns toward consolidation and vertical integration. However, interviews with SSC personnel demonstrated an understanding of the need to access new high volume and niche markets.

The local market for soybean meal was expected to be substantial. The feasibility study indicated that in the eight counties, including Adams, there is a demand for 61,557 tons of protein supplement per year. Under the expected production targets, the SSC would produce 13,456 tons per year or approximately 21.9 percent of the local demand, with the remaining meal obtained from the closest markets that are within an 80 mile radius of the processing facility.

In addition to the feed supplement, the soybean process generates a variety of oils for commercial and industrial uses. Potential markets for these products were less well-defined but Kraft Foods in Jacksonville, Illinois (309.4 miles away), and a local feed supplier in the eight-county area were identified in the feasibility study. With additional research and the possible refinement of the oil, it is possible that other industrial markets could be found, but reaching these markets could mean additional processing facilities and higher subsequent costs to the co-op as well. While investors generally recognized these potential markets, they did not aggressively pursue them as part of the initial venture.

To assess local interest in starting a soybean processing venture, the steering committee undertook a survey of farmer-producers in the region. In the winter of 1995, a local media campaign was conducted using newspapers and radio to generate an awareness of the effort and to possibly stimulate interest in becoming involved. A mail questionnaire had been sent to approximately 4,000 residents to determine whether they would be interested in investing in this venture and/or willing to purchase the soybean meal produced to use in their feeding operations. No effort was made to obtain a complete sample of soybean producers in the area; rather, the

intent was only to determine whether a sufficient number of producers were interested in engaging in this venture to make it succeed.

According to the feasibility study, the survey identified a willingness to commit 206,000 bushels of soybeans to the process. Overall, 34 producers completed the surveys, 23 reported being “very interested,” and 10 reported “an interest if more information could be provided.” The 206,000 bushels reported as a possible commitment represented approximately two-thirds of the planned production in the initial year. Thus, it was clear from the outset that additional commitments by farmer-producers would be needed to provide a stable supply of soybeans for this processing plant. Likewise, concern was expressed in the feasibility study regarding the adequacy of the market for the soybean meal (Jobe 1996, p. 11).

In fact, many entrepreneurs experience difficulties accurately accessing the market(s) for their product, and this may be one of the most serious shortcomings in business start-ups, especially those involving farm products. In the past, farmer-producers relied on an extensive marketing system for their products; namely, they delivered grain to a local elevator or river terminal.

Engaging in value-added business, on the other hand, represents a set of entirely different tasks, some of which producers have not had to deal with extensively in the past. Obtaining a commitment from producers to provide the inputs to the soybean processing plant is certainly at the top of the list of tasks that need to be accomplished. Identifying markets to be served also ranks high. Putting together a financial package to make the operations profitable requires skills and familiarity with issues that not all farmer-producers possess.

Organizing the soybean processing activity, therefore, required professional skills in marketing, finance, and production management. This combination of skills was not likely to be found among members of the proposed co-op. Thus, it was essential that a professional manager be hired for the venture, and that decision was made early in the process. Hiring the manager early in the process makes sense because then the manager can assist in organizing the membership drive. As is noted later, some difficulties arose with this position that may have delayed the profitability of the enterprise.

To determine interest in joining the proposed venture, 200 surveys were mailed out to farmer-producers, of which 130 responses were obtained with 70 of those indicating an interest in becoming members. A majority of the members purchased one or two shares. The members typically have larger than average farm size. Members must commit 1,300 bushels of soybeans per share per year, which represents approximately 29 acres of soybeans.

Several approaches could have been used to attract members and participants to the co-op. First, the basic membership should always be made up of the farmer-producers who supply soybeans to the processing plant. Second, it is also possible to structure the co-op to include users of the final product. In this case, it would be pork producers who would receive a return based on the amount of soybean meal purchased. Including the users makes sense because it helps solidify the markets. On the other hand, it can be difficult to attract these members due to

commitments they may already have with suppliers or competition from other purchasing cooperatives with established markets.

In fact, as hog producers increased in size, the industry, became vertically integrated, meaning that many large producers already have sources for purchasing feed. Competing with these markets means that the SSC must establish its product as superior in weight-gaining potential, lower cost, or providing some other advantage. In addition, it must establish a lasting presence as a dependable supplier for users to shift from their existing feed sources. This has proved difficult for SSC for several reasons.

1. The main advantage of the extruder process used by SSC is that animals gain more weight per pound of meal fed than in the case of the feed supplied by competitors. As has been determined through interviews (see footnote 1), local informal tests by producers have documented this fact. The estimated cost savings, based on informal tests, is between \$35 and \$40 per ton gained. However, for these gains to be accepted by a large number of hog producers and cause them to shift from current suppliers requires independent tests and documentation by an impartial source such as a university. These tests are estimated to cost between \$30,000-\$50,000. While funds exist for tests and documentation of innovative productions, it is difficult to make the case that what is being done by SSC should be included in the innovative category. These tests are somewhat expensive and have, to this point, been beyond the means of the SSC in its fledgling operations since 1997.
2. Meeting expected production levels to make the processing plant financially stable requires a specific level of operation. The feasibility study is based on two eight-hour shifts. To reach this target, requires a larger market than the co-op currently has. The upshot is that financial losses, even though manageable, have occurred, weakening the confidence of purchasers that the co-op will survive. At the same time, without the additional volume and markets, it is difficult for the co-op to prove that it can last. In many ways, these difficulties are not unexpected or unusual for a business in its early operations but point out the importance of having adequate financial capital and management in place when the venture begins.

### **Getting Started**

The SSC began operations in 1997 as a closed co-op organized under Chapter 501 of the Iowa Code. Selection of a co-op style of business was made mainly for the following reasons: (1) Iowa statutes limit the size of corporations to a maximum of 35 investors; since the intent was to work with a larger number of farmer-producers in the soybean processing plant, an alternative organizational structure was needed, and (2) co-ops provide tax advantages over limited liability corporations.

The SSC started with 70 members in 1997, and the number has declined to 58 in 1999. Each member contributed \$1,500 at the beginning plus a commitment of 1,300 bushels of soybeans to be delivered to the processing plant annually. Operating losses forced a call for an additional

infusion of funds in 1999. It took between 18 and 24 months to go from the start of discussions to the actual formation of the co-op. SSC is managed by a five-person board of directors, each serving a three-year term. The terms are staggered so that each year approximately the same number of members are elected.

While initial plans called for a location in the Bluegrass Industrial Park in Corning, Iowa, an alternative site was found in a vacant elevator that already contained storage facilities. An arrangement was made with the owner to rent the facilities for \$3,500—essentially the cost of storage fees for the soybeans—but the SSC had to rehabilitate the building for use and this rehabilitation project was more expensive (\$100,000) than had been budgeted (\$40,000). The high cost of rehabilitating the building, in turn, drained the funds for alternative uses such as market development or professional staff. The SSC also worked with utilities to obtain a reduction of 5 to 6 percent in utility costs.

### **Financial Structure**

In order to meet its anticipated capitalization needs of \$530,000, the SSC is financed through several funding sources (**Table 1**):

1. Members contributed a total of \$200,000 in cash from sales of 128 shares to 70 members in 1997. This represents approximately 40 percent of the total financing. Because of operating losses in 1998 and expected losses in 1999, each member was required to contribute an additional \$650. In some instances, participants decided not to continue their membership and forfeited their initial investment.
2. The SSC borrowed \$140,000 through a revolving loan fund from the Southwest Iowa Coalition at 5 percent interest. This is a ten-year loan and demonstrates the participation of local economic development groups working with private businesses to stimulate the local economy.
3. The USDA-RD loaned the SSC \$90,000 at 8.5 percent for 15 years under the Direct Business and Industry Loan program. This is a federal program designed to create additional jobs in distressed areas. It provides a source of needed funds for many business start-ups.
4. Iowa has a Rural Economic Value-Added Mentoring Program (REVAMP) to assist in creating value-added businesses and to help provide jobs in rural areas. The SSC obtained two grants through this program totaling \$25,000. The first grant was for \$16,500. These funds were used to pay the Small Business Development Center for developing the Business Plan, and the balance was used for legal costs incurred in the development of the organization. A second grant for \$8,500 was used hire a professional consultant to work on a marketing plan.
5. The Iowa Farm Bureau and the Iowa Soybean Board each contributed \$10,000. These funds were used to retain a marketing and sales consultant to work with the SSC.

6. USDA-RD's Cooperative Service staff in Iowa provided technical assistance by preparing the feasibility study. This is an in-kind contribution provided at no cost to the SSC. Feasibility studies by private consultants often run upwards of \$40,000 to \$50,000. In addition, several grants of \$1,000 and more were provided by local agencies as part of the start-up endeavor.

**Table 1. Financial Structure**

<i>Source</i>	<i>Amount</i>	<i>Percent of Total</i>
Sales of Shares to Membership	\$200,000	40
Southwest Iowa Coalition Loan	\$140,000	26
USDA-RD Direct Business & Industry Loan	\$90,000	17
REVAMP Grant 1	\$16,500	3
REVAMP Grant 2	\$8,500	2
Iowa Farm Bureau Donation	\$10,000	2
Iowa Soybean Board Donation	\$10,000	2
In-kind TA & Misc. Small Grants by Local Agencies	\$55,000	8
<b>Total</b>	<b>\$530,000</b>	<b>100</b>

Source: Southwest Soy Cooperative, 1999.

There are three types of capital stock in the SSC. Only one share of the first type of capital stock, *common stock*, may be held by a shareholder at a cost of \$100 per share; no dividends are paid on common stock.

*Class A Preferred Stock*, is used to determine the number of bushels of soybeans that members are expected to provide to the venture. This stock can be transferred between members with the understanding that no member can hold more than 15 shares of this type. No dividends are paid on this stock, and shareholders do not have voting rights on co-op decisions.

*Class B Preferred Stock*, the third type, is issued and redeemed at \$1 per share. Holders of this stock have no voting rights and the stock pays no dividends. This stock is not actually purchased. When a co-op has margins, the margins are distributed to the members based on the their participation in the co-op in the fiscal year. In this case, it is the amount of beans delivered and processed by the co-op. The producer's percentage of the net margins are partially paid in cash (by law, the minimum amount paid must be 20 percent), and the balance is retained by the co-op. The producer at this point will be issued *Class B Preferred Stock* in an amount equal to what was retained by the co-op. At some point in the future, the board of directors will make the decision as to the oldest outstanding year of stock.

A philosophical issue that faces most, if not all, NGCs is the amount of earnings to be distributed to members. On one hand, retaining a large portion of earnings in some ways defeats the purpose of the co-op since it is intended to increase the incomes of members; however, expanding operations and replacing equipment requires that the co-op have access to capital. Over the long-term, these investments may pay the largest dividends for members. The SSC bylaws (2.4C) require that the co-op distributes "all net savings attributable to member business"

remaining after *Class B Preferred Stock* allocations have been made. Allocations of net savings can be made in cash or in *Class B Preferred Stock* at the discretion of the board of directors.

### Financial Operations

Since it began in 1997, the SSC operations have not met financial expectations. In 1998, it suffered a loss of approximately \$64,000 and it is expected to lose between \$18,000 and \$25,000 (including interest payments) in 1999.

The following three factors account for most of the financial difficulties experienced by the SSC thus far:

1. The crush margin at the outset was expected to continue at approximately \$1.18 per bushel of soybean meal. Even at this level, the margin is fairly tight; unfortunately, the crush margin dropped to \$1.13 and then to as low as \$.13 as the price of soybean meal dropped more quickly than the price of soybeans. The feasibility study was clear that changes in the margin could make the venture unprofitable (see **Table 2**).

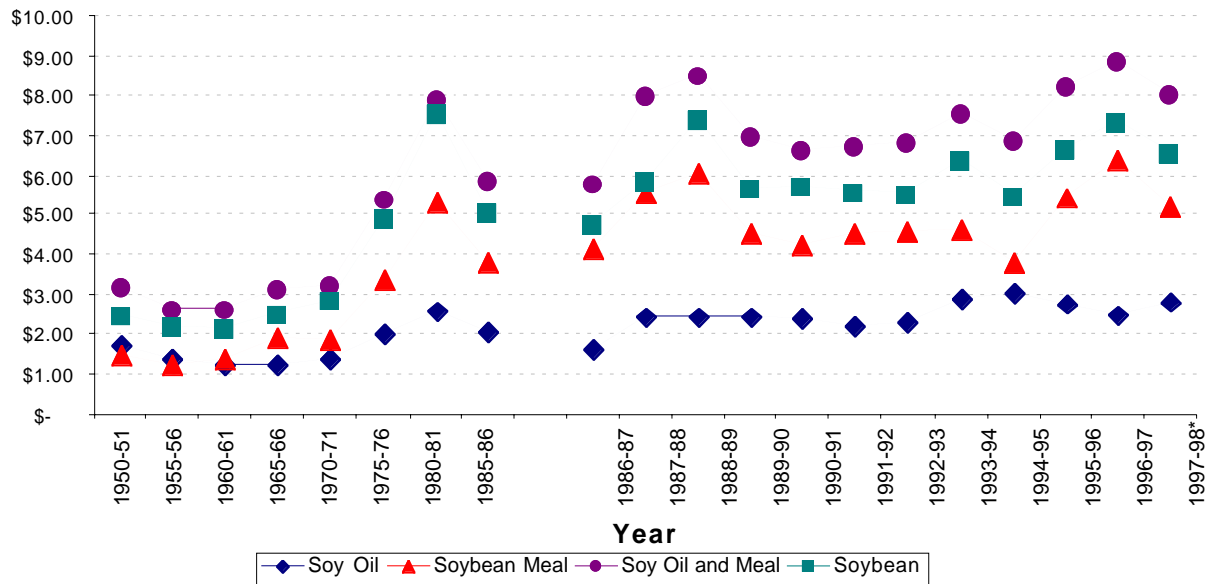
**Table 2. U.S. Soybean Products: Value and Crush Margin per Bushel, 1950-1998**

Year beginning September	Value of Products per Bushel			Soybean Price Rec'd by Farmers (dollars)	Margin Rec'd by Farmers (dollars)
	Soy Oil Value (dollars)	Soybean Meal Value (dollars)	Total Value (dollars)		
1950-1951	1.74	1.48	3.22	2.47	0.75
1955-1956	1.39	1.24	2.63	2.22	0.41
1960-1961	1.23	1.41	2.64	2.13	0.51
1965-1966	1.26	1.91	3.17	2.54	0.63
1970-1971	1.38	1.88	3.26	2.85	0.41
1975-1976	2.02	3.40	5.42	4.92	0.50
1980-1981	2.58	5.32	7.90	7.57	0.33
1985-1986	2.06	3.84	5.90	5.05	0.90
1986-1987	1.65	4.15	5.80	4.78	1.02
1987-1988	2.44	5.54	7.98	5.88	2.10
1988-1989	2.42	6.08	8.50	7.42	1.08
1989-1990	2.44	4.53	6.97	5.69	1.28
1990-1991	2.39	4.28	6.67	5.74	0.93
1991-1992	2.20	4.53	6.73	5.58	1.15
1992-1993	2.28	4.58	6.86	5.56	1.30
1993-1994	2.91	4.64	7.55	6.40	1.15
1994-1995	3.07	3.83	6.90	5.48	1.42
1995-1996	2.78	5.44	8.21	6.72	1.49
1996-1997	2.47	6.41	8.88	7.35	1.53
1997-1998*	2.81	5.23	8.04	6.58	1.46

\*Through March 1998

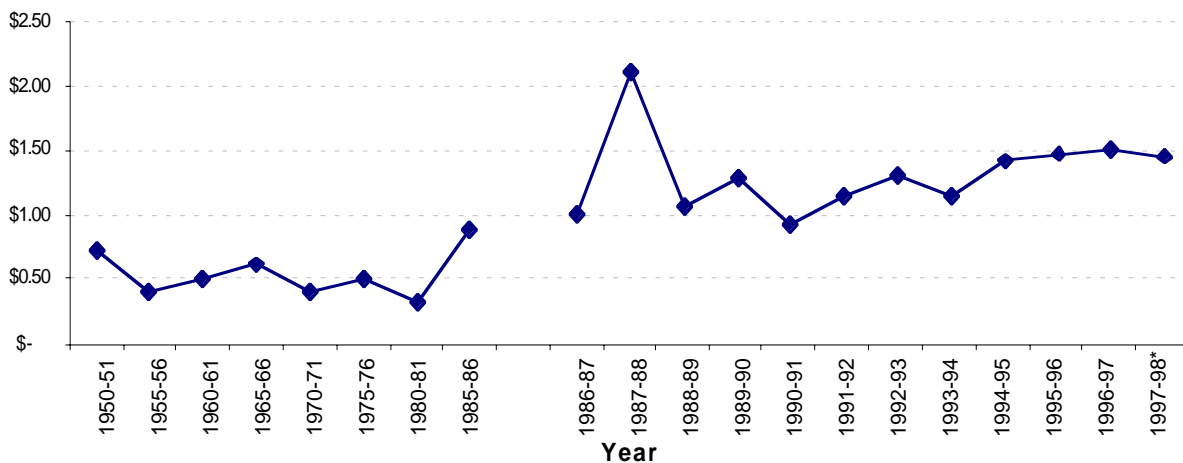
Source: USDA Economic Research Service, May 1998.

**Figure 1. Value of Soybeans and Products per Bushel**



\*Note: in both Figures, the year (x axis) changes from five-year intervals (1950-1985) to one-year intervals (1986-1997); the break in the lines indicates the change.

**Figure 2. Margin Received by Farmers per Bushel**



\*Because Census reports crush and production quarterly, yields of meal and oil will be adjusted quarterly.

Source: 1999 Soya & Oilseed Bluebook: The Annual Directory of the World Oilseed Industry. 1999. Bar Harbor, ME: Soyatech, Inc., p. 363.

Currently, producers are paid the Board of Trade price minus \$.35 per bushel to allow for the nearby basis. Producers will be paid within two days of delivery. The meal produced is sold at the Board of Trade price plus \$35 per ton.

2. The SSC has not been able to reach its production targets. To be profitable, it would have to reach  $\frac{9}{16}$  of its target level or 12 tons of meal per day. Reaching that production target will require accessing a much larger market which is the main reason for hiring a marketing consultant. Without being profitable, it is difficult to purchase soybeans from members as promised in the agreement. Also, sales are not consistent throughout the year which creates cash flow problems. Better efforts to access additional users as well as stabilize existing markets would help considerably in the profitability of the operations.
3. The importance of an effective manager is paramount. The first manager had to organize the effort, manage the remodeling and rehabilitation process, and identify new markets. In the process, the marketing effort did not receive adequate attention which led to financial difficulties later. A new manager with a background in marketing and production has been hired, and with help from the marketing consultant, financial conditions should improve.

Of special interest is exploring markets for the soybean oil extruded from the process. Crop oil is one product that has been identified. It may be possible to produce oils for human consumption but, while this market could be more lucrative, it would require additional processes that would involve added expense. The local market for crop oils may be limited because operators have established connections with existing distributors. The crop oil market, however, could be profitable and is one that is actively being explored by SSC personnel.

Another market under consideration is the sale of soybean meal for show dogs. The product could be bagged and marketed through a chain. The high fat content of the meal makes animal hair shine which is an attractive feature for show animals. To access this market means bagging the final product which would involve additional costs and, possibly, a second production line. The dog food market, however, could complement the hog and dairy market and help stabilize the cash flow. Dairy operations, especially, do not feed heavily during the summer months which could significantly reduce the demand for soybean meal. It might also be possible to ship the soybean meal in bulk to an existing dog food producer, thereby removing the need for a bagging process aimed at the final user. This option is also being explored by SSC personnel.

Because of the declining crush margin and the revenue shortfalls, SSC is not current on its debt payments. It currently owes \$85,000 on the \$90,000 USDA loan and \$118,000 on the revolving loan application from the Southwest Iowa Coalition. In 1999, it paid neither principal nor interest on this loan. Members have also contributed an additional \$650 each in capital to maintain operations.

Even so, interviews with personnel revealed a positive attitude regarding the future of the enterprise and a basic understanding that the changed market conditions had a very serious impact on the SSC's viability. In hindsight, had management responded differently and more

quickly to events when the operation was beginning, the financial condition might be somewhat different. However, the main factors contributing to the delayed profitability have been the inability to market the soybean meal and oils effectively and the declines in the crush margin. While the former might have been affected by different management personnel and practices, the latter is largely beyond the control of SSC personnel.

### **Lessons Learned and Ways To Proceed**

While the SSC is still not profitable in its second full year of operation, this is not at all uncommon for businesses just starting up. SSC management seems cautiously optimistic at this point and has plans for expanding the market. The initial manager has been replaced, and the operation is producing a high-quality product with a high weight-gain potential for animals.

At this point, one might ask what can be learned by other investors interested in starting comparable ventures. Market fluctuations can never be controlled, or even anticipated, completely. Declines in the crush margin and the consequences for the co-op's profitability are hard to avoid even though the feasibility study highlighted this issue and reported that even slight changes in market conditions could have a serious effect on profits. Perhaps the lesson to be learned from this experience is to raise sufficient capital to weather revenue shortfalls in the early years of operation. Insufficient capital is a problem faced by many, if not most, small businesses in their early years.

The cost of the new machinery for this production process was \$89,450. The relatively soft market currently has made used machinery available. New groups interested in replicating the machinery and equipment in the SSC plant could probably purchase the equipment used. Of course, purchasing used equipment always holds a risk factor of dependability and potentially higher costs of repairs. Indeed, some of the programs financing these operations may impose restrictions regarding dependability of equipment, a requirement to purchase instate, or other consideration that could prevent a purchase of used equipment. Despite potential restrictions, serviceable used equipment can reduce the amount of initial capital needed and could allow funds to be used for market development, management services, and other expenses instead.

Perhaps a more useful lesson to be learned from the experiences of this venture is the importance of identifying and/or establishing markets prior to starting operations. The feasibility study made clear that additional commitments were needed for the business to be profitable. Had the current effort of involving a professional marketing consultant been started earlier, these markets might have made the difference in profitability.

The vertical integration in hog production with greater reliance on established suppliers has been underway for several years, but its impact on the SSC might not have been evident at the start. Once again, the importance of identifying solid markets is key to the profitability of this business, and additional research on market trends might have prevented several lean years in the operation.

Finally, current efforts to identify alternative markets for both soybean oil and meal are key to continued operations. If the dog food and dairy markets for meal materialize, they could

substantially improve the profitability of SSC and help stabilize the markets. A more positive cash flow would allow the manager to work with farm-producers on a regular delivery schedule. The uneven demands for beans makes it difficult for farm producers to know when they will have to deliver soybeans to the plant.



## **Golden Triangle Energy Cooperative, Inc. Ethanol Plant**

*by Rodney Fink*

### **Background/Profile of Cooperative**

#### **Statewide Guidance**

The Missouri Corn Growers Association (MCGA) and the Missouri Corn Merchandising Council (MCMC) studied the potential for corn processing plants in the state and funded several economic studies in the early 1990s. Officers of the Corn Board lobbied major ethanol producers and encouraged them to build a plant in the state. Companies such as Archer Daniels Midlands (ADM) and Farmland Industries were contacted but were unresponsive to expanding construction to north Missouri. Gary Marshall, Executive Director of the MCGA, encouraged several members to take the initiative and model a cooperative after those that had succeeded in Minnesota and the Dakotas. The Golden Triangle Energy Cooperative (GTEC), developed in northwest Missouri, and the Northeast Missouri Grain Processing Cooperative is under construction in Macon, Missouri. (Ground breaking for the northeast Missouri plant was on April 17, 1999.)

#### **Beneficiaries**

According to studies by Van Dyne and Associates (Van Dyne 1993; Van Dyne and Braschler 1996; Van Dyne, Braschler, and Blase 1996) the state and area where the plant was located would benefit. The economic effect of a successful plant would be felt in the community where the plants were located and would add economic advantage to the entire region. The state would benefit from the taxes being generated in the state rather than in neighboring states with similar production units. Communities visited by the researchers were enthusiastic about the possibility of new employment opportunities. The following positive benefits were cited in their studies:

- Positive balance of trade impact which would bring more income into the region because products that were previously purchased would be produced locally and exported to other regions.
- Increased value-added to the corn crop which would benefit the producers and possibly provide more revenue to the local community.
- Increased investments in plants and equipment which would stimulate the local economy by providing construction jobs initially and the chance for full-time employment after the plant is completed.
- Net increase in jobs and income in each community and in the state would result during construction and continue after the plant begins operation. Secondary employment is also possible as associated industries develop as a result of plant byproducts becoming available at a competitive price.

- Increased local and state revenues collected from corn processing plant operations would stimulate local and state tax revenues and provide funds for improvements to the community and to the region.
- Likely increase in associated businesses resulting from the ethanol plant as the increased numbers of jobs would require additional goods and services because of the expanded workforce.
- Environmental benefits to the state from the use of ethanol-blended transportation fuels in automobiles and other engines.

### **Positive Benefits from Ethanol Plants**

Most states with corn processing plants have reported positive benefits from their operation. In addition, many states offer financial incentives for corn processing plants; the benefits of these incentives must be quantified so that the net value to the state can be identified and assessed. In Missouri, the state incentives include an annual \$.20 per gallon production incentive (for up to 12.5 million gallons and \$.05 thereafter) for the first five years of plant operation. Plant ownership also affects the increased revenues that accrue to local and state governments. In Minnesota, most corn processing plants are owned as New Generation Cooperatives (NGCs). In this ownership structure, assumed net earnings are distributed to member-owners, and local, state, and federal income taxes are paid by member-owners. When the plant operates as a corporation, income taxes are paid by the corporation, and dividends are distributed to shareholders who pay personal income tax on dividend earnings, creating double taxation. GTEC is an NGC, and income taxes are assumed to be paid by the member-owners with no corporate taxes collected.

### **Plant Location**

A study by Van Dyne (1993) in the early 1990s found considerable enthusiasm for locating an ethanol plant in communities of northwest Missouri. The state of Missouri designated St. Joseph a depressed economic region, and local leaders supported an ethanol plant for the region. Members of the St. Joseph Area Chamber of Commerce promoted the program and assisted in raising venture capital. The original intent was to construct the facility in St. Joseph but difficulties in finding a site necessitated moving the facility to another town. One factor which necessitated the move was a requirement that a USDA loan guarantee is available only to towns with populations of less than 50,000. Craig, Missouri (population 347), surfaced as a good site since it had the physical characteristics needed for an ethanol plant—namely, (1) has an adequate water supply, (2) possesses a natural gas line, (3) is close to an interstate highway, and (4) has a major railroad line (the Burlington Northern passes through).

Approximately 40 acres are needed for the construction site, and adequate land was available near Craig. The site selected contains 91 acres and is located along a Burlington Northern Santa Fe (BNSF) railway line and less than one-half mile from the intersection of Interstate 29 and U.S. Highway 59. The site can be served by two electric utility companies, and a gas pipeline is located under the site. GTEC plans to tie into the city of Craig for water and

sewer utilities. The site provides easy access for grain trucks moving through the area and is large enough to house associated industries that wish to locate nearby.

### **Design, Construction, and Leadership**

Several ethanol plant designers (including Broin Enterprises, Inc., of Sioux Falls, South Dakota, and Delta T) and the likely contractor, Feagan, Inc., have met with the GTEC board during the planning process. Feagan Inc., and Broin Enterprises, Inc. expressed interest in investing in the cooperative that would require the creation of a Limited Liability Company (LLC).<sup>1</sup> This would require joint governance by the GTEC and the LLC. Feagan, Inc. has built plants in Minnesota and in the Dakotas and is an experienced builder of ethanol plants. The Board of Directors consists of 13 members who have been active throughout the process, providing input, decisions, direction, and financing.<sup>2</sup> All GTEC board members have made a major investment of time and money to help get the project underway.

### **Key Players**

Many key players exist in the project. The board president and the board members have all been supportive, persevering, and diligent in the years since the project was initiated.<sup>3</sup> Early support and encouragement came from the MCGA and MCMC. They funded feasibility and benefit studies, and the executive director of MCGA encouraged several individuals (now GTEC board members) to move ahead with the project. Support from a retired official of Farmland Industries and a local radio station director (who additionally serves as the Chamber of Commerce farm committee chairman) also helped drive the project.<sup>4</sup>

The first venture capital committed to the project was \$40,000 from the Kansas City/St. Joseph, Missouri, Diocese Catholic Charities organization. The director of Catholic Charities said the organization wanted to support economic development in rural areas and liked the idea of adding value to local products and creating jobs for local people.<sup>5</sup> The MCMC (with check-off funds) matched the \$40,000 commitment of Catholic Charities and additional organizations added venture capital for a total of \$180,000. The venture capital raised from these sources was held in a Community Development Corporation named “AGRIVEST,” which was created to hold funds until needed for the organization.

The corporation plans to continue after GTEC begins operation and assist the formation of additional economic development ventures for the region. The board consists of officers (president, vice-president, and treasurer) from Catholic Charities and current members of the GTEC board. The cooperation of these people enabled the project to begin by providing the risk capital that encouraged others to join as well. When the construction phase begins (when the investments, contracts, and loan are signed), all venture capital investors will be paid the initial investment plus a matching amount (thus Catholic Charities will receive \$80,000). The payback can be retained by the contributing organizations, although the hope is that the funds will remain intact and be available for future economic ventures to support the region (share ownership in GTEC is also a possibility). Board members, who also made a considerable investment of time

and fundraising (in addition to their shares in the venture), will receive a payback when the final loan fund is placed in operation.

The combination of organizations and individuals is a good model for economic development. Catholic Charities wanted to help the economy by creating jobs; the chamber of commerce also wanted to help the local economy; and the farmers involved wanted to add value to their grain. The MCMC provided funding for the initial studies that generated interest by farmers, and it also matched the funding by Catholic Charities. The reinvestment of funds to these organizations by GTEC will provide further impetus to future economic development endeavors. The actions of these groups can provide a good model for other communities in promoting economic development. Likewise, continued cooperation of these organizations can generate additional business opportunities for the St. Joseph area.

### **Start-Up Funding**

Catholic Charities is credited with providing the initial funding that enabled the project to start. After providing much assistance during the Missouri River flood of 1993, the Kansas City/St. Joseph Diocese of the Catholic Church wanted to support economic development that would benefit rural areas, especially the creation of jobs. Representatives of Catholic Charities met with St. Joseph Area Chamber of Commerce officials and asked what projects might be available that could use assistance in the form of “seed money.” Among projects considered was GTEC. Catholic Charities initially intended to provide the funding as a grant, but the acceptance was made with the understanding that they would be repaid or would become shareholders. The initial commitment of Catholic Charities is credited with providing the momentum to start the cooperative. When groundbreaking took place, the St. Joseph/Kansas City Diocese leaders were key participants.

### **Regional Support**

The St. Joseph Area Chamber of Commerce provided early assistance to the project with in kind support such as accounting, office help, and general project assistance.<sup>4</sup> The chamber president was supportive as was the Farm Committee Chairman, with one member, a Farm Director of KFEQ (now Farm Director of WHO in Des Moines, Iowa), being a key player and promoter. According to the Farm Committee Chairman, the St. Joseph Chamber served as the office and clearinghouse for the project as it developed. The Agribusiness Committee of the Chamber existed before the Chamber of Commerce was established; however, it had been somewhat inactive in recent years. The chamber president, a chamber employee, the Farm Committee Chairman, and an interested and committed board nucleus supported and promoted the creation of an ethanol plant.<sup>7</sup> The chamber not only provided an office and served as a coordinating body for GTEC, it also lobbied the state legislature for incentives for ethanol production. [When Catholic Charities contacted the chamber in search of a job creation project, GTEC was suggested to them as a possibility. Catholic Charities liked the idea of adding value to local products and especially liked the job creation potential of an ethanol plant.] Malcom McCance, an employee of the St. Joseph Chamber and GTEC board member (currently employed by GTEC as working manager), conducted much of the initial coordination for GTEC

and assisted its Board in facilitating the project.<sup>8</sup> According to Wergen, the ingredients that made this project successful include the following:

- The presence of a good idea (ethanol plant)
- The presence of a good group of people to promote, invest in, and raise funds for the project (GTEC Board)
- Support of a local group that could coordinate and help in the initial stages (the Farm Committee of the St. Joseph Chamber of Commerce)
- The presence of groups willing to invest in the project (Catholic Charities and others)

## **Proposed Plant**

### **Dry Milling Process**

The proposed plant will utilize a dry milling process (in contrast to a wet milling process) that will produce ethanol and high protein dried distillers grains and solubles (DDGS). Carbon dioxide is also produced in the processing; some plants recover it for sale while others do not. In the wet milling process, which is usually found in larger plants, a variety of products, in addition to ethanol, such as starch, corn syrup, corn gluten feed, corn oil, and carbon dioxide, can be produced.

### **Plant Input and Output**

Corn prices fluctuate widely, depending on weather and international demand; analyses predicting long-term benefits use long-term averages in the vicinity of \$2.30 per bushel. The output from a bushel of corn is about 2.7 gallons of ethanol and 16 pounds of DDGS. Assuming a sales price of \$1.20 per gallon of ethanol and \$120 per ton of DDGS (currently less but \$120 is considered a long-term average), the value for ethanol is \$3.24 and for DDGS \$0.96 or a total value of \$4.20 per bushel of corn. Thus, the value-added is \$1.90 per bushel of corn. At full operation, the plant is expected to process approximately 5.6 million bushels of corn annually for a total increase of about \$10.65 million. This added value benefits the community and the state; however, the value added must also cover the processing costs for the plant (Van Dyne, Braschler, and Blase 1996).<sup>9</sup>

## **Ownership and Management**

The sale of shares in GTEC has been an active project of board members, assisted by the St. Joseph Chamber of Commerce. Initial offerings were \$12,500 per share. For each share purchased, the shareholder had the right to deliver 5,000 bushels of corn for processing. After the initial round of investing, the cost per share was increased to \$13,000 per share. Subsequently, shareholders were allowed to add to their investment in increments of \$1,000 which increased their delivery rights by 385 bushels.

Additional investments can still be made as GTEC strives to increase the amount of money available for leveraging with the lending company (Stearns Bank of St. Cloud, Minnesota). Since the Craig, Missouri site has been selected, shareholders will have a chance to cancel their

obligations or add more shares as they desire. As of October 1, 1999, over \$6 million of investment has been received from 275 investors. Financing guarantees are anticipated from the USDA loan guarantee program available to operations built in communities with population less than 50,000. When the loan agreement is signed, Stearns Bank will submit a request to USDA for a loan guarantee. The USDA then conducts an environmental review and public comment period before giving such a guarantee. After opening its office GTEC employed a full-time managing director. As an NGC, farmers who invest in the plant will have the right to supply corn to the plant and receive an end-of-year value-added payment, similar to a stock dividend. Return to investment is expected to be between 25 and 30 percent per year which is in line with the return paid by similar cooperatives in Minnesota and the Dakotas.

The plant will operate year-round and will buy corn throughout the year. On-site storage will accommodate about 20 to 25 days of operation, so grain must be continuously purchased. The board and managing director are investigating additional operations, such as a poultry production feed mill, feeding operations, and other related operations, that could locate near the plant and take advantage of the DDGS.

### **Assumed Economic Benefits of an Ethanol Plant in North Missouri**

The economic assessments in northwest Missouri reported positive benefits from construction of an ethanol plant. Initially, the corn industry requested production incentives for an ethanol plant in the amount of \$.20 per gallon of ethanol produced for the first five years. Corn producers in Missouri need state incentives similar to other states; otherwise, Missouri producers would be at a disadvantage in selling ethanol, either in or out of state. Other incentives continue to be considered by the Missouri legislature.

### **Balance of Trade**

Since virtually all of the liquid motor fuels used in Missouri are currently imported (including ethanol used in gasoline blends and E-85 vehicles), the added value to motor fuels accrues to other states and to other nations. According to Van Dyne (1993) and the 1994 Missouri Department of Revenue statistics, about 3.7 billion gallons of gasoline, diesel fuel, and gasohol were used in the state in 1994, an increase from 3.1 billion gallons in 1986. Of this amount, other sources indicate that at least 2 billion gallons are gasoline, with gasohol having an estimated 10.46 percent market share of all gasoline sold in the state. Using an average wholesale price of \$0.58 (without state and federal excise taxes), the deficit balance of trade for gasoline in 1994 was \$1.2 billion. The 15 million gallons of ethanol produced from an ethanol plant could enhance Missouri's balance of payments by \$8.7 million annually (by reducing the volume of gasoline imported into the state). Two plants could reduce imports into Missouri by \$17.4 million. In-state production reduces the outflow of money to other states and generates tax revenues for the state. Likewise, jobs created also impact the local and state economy.

### **Plant Investment**

The industry average for constructing an ethanol plant is less than \$2.00 per gallon of annual production (Van Dyne, Braschler, and Blase 1996), although GTEC anticipates a lower

construction cost. Construction of the GTEC (including start-up costs) will be about \$21.5 million, which will be spent during the construction stage (late 1999 and early 2000). The plant is to be put into full-scale operation in the year 2000. The estimated jobs and economic impacts of constructing and operating a 15 million gallon dry milling ethanol plant can be seen in **Table 1**.

**Table 1. Job Creation Impact from Ethanol Plant**

<i>Description</i>	<i>During Construction</i>	<i>Plant Operation</i>
Increase in jobs	388	206
Increase in personal income (million \$)	\$34.3	\$27.9
Increase in total economic activity (million \$)	\$36.6	\$30.9

*Source:* Based on inputs of Van Dyne and Braschler 1996; Van Dyne, Braschler, and Blase 1996.

The construction jobs and impacts will exist only during the plant construction phase; whereas, the impacts for plant operation will be in place annually as long as the plant is in operation.

### **Potential Associated Industries**

Livestock and/or poultry feeding operations are likely to locate near a corn processing plant. North Missouri has a large number of cow-calf operations, and many yearlings are shipped to feedlots in Kansas, Nebraska, and Colorado. A corn processing plant could result in increased beef feeding in northern Missouri. If a significant amount of the DDGS from a plant were fed to livestock, a major benefit to the region could occur. An analysis by Van Dyne revealed the following:

- A 15 million-gallon ethanol production plant would produce about 48,800 tons of DDGS per year (6.1 million bushels of corn @ 16 pounds of DDGS/bu).
- Beef cattle would be put on feed at 700 pounds and sold at 1,100 pounds.
- A 700 pound steer would consume about 18 pounds of feed/day of which up to 40 percent could be DDGS; while a 1,100 pound steer would consume about 25 pounds of feed daily.
- Steers would gain about 3 pounds/day, thus requiring about 133 days in the feedlot.
- At about 8 pounds of DDGS/day for the 133-day period, each steer would consume slightly over one-half ton of DDGS.

If the DDGS from a single 15 million-gallon ethanol plant were fed to feedlot animals at a maximum rate of one-half ton per animal, approximately 100,000 steers could be fed. Such a plant could foster a significant increase in the cattle feeding in the region.

Van Dyne estimated the following jobs, investment, increased income, and tax collections resulting from a feedlot that finished 50,000 animals annually (See **Table 2**).

**Table 2. Estimated Values of a Livestock Operation**

<i>Item</i>	<i>Values</i>
Increased jobs	365
Increase in personal income (million \$)	\$46.1
Increase in total economic activity (million \$)	\$64.9
Income tax (thousand \$)	\$1,844
State and local sales tax (thousand \$)	\$1,982
Excise taxes on motor fuel (thousand \$)	\$43
Total annual tax collections (thousand \$)	\$3,869

*Source:* Van Dyne and Braschler 1996; Van Dyne, Braschler, and Blase 1996.

Significant benefits would result to the local and to the state community if a cattle feeding operation located near the ethanol plant. Of the 365 new jobs, 50 were with the feedlot, which requires relatively few jobs because of the highly automated system. Local and state estimated annual tax revenues include income, sales, and excise tax revenues. They exclude sales taxes from inputs necessary in operating the feedlot. Real and personal property taxes were not included in the scope of the report (Van Dyne 1993; Van Dyne and Braschler 1996; Van Dyne, Braschler, and Blase 1996); however, they would have an impact on the community, especially school funding.

The impact that could result from an integrated feedlot complex, which would be built around the nucleus of a corn processing plant, could be quite important for local economies as well as for the state as a whole. If the complex were expanded to include a cattle processing plant, the economic activity would increase even more. A large poultry production facility is close to Craig, Missouri and has shown interest in using DDGS in its feed rations. In addition, a pet food manufacturer has indicated some interest.<sup>2</sup>

### **Estimated Revenues to State and Local Governments**

**Table 3** shows the estimated annual tax revenues collected by local and state governments as a result of the construction of a 15 million gallon ethanol plant.

**Table 3. Estimated Tax Revenues as a Result of an Ethanol Plant**

<i>Type of Tax</i>	<i>Construction Phase</i>	<i>Operation Phase</i>
State income tax	\$1,372,000	\$1,117,000
State and local sales tax	\$1,475,000	\$1,390,000
Excise tax	\$ 64,000	\$179,000
Real and personal property tax		\$332,000
Total estimated tax revenues	\$2,911,000	\$3,018,000

*Source:* Van Dyne and Braschler 1996; Van Dyne, Braschler, and Blase 1996.

The state treasury is expected to spend \$3 million annually to fund the producer incentive (\$0.20 per gallon x 15 million gallons = \$3 million). Based on estimates in the feasibility study, tax revenues to fund the producer incentives will be offset by income to the state treasury during the first and subsequent years of operation. The producer incentive will expire in 2007 and, unless extended, the state will then gain another \$3 million annually.

## **State Incentives**

The State of Missouri has allocated a credit for the two ethanol plants being built in northern Missouri. This incentive consists of \$0.20 per gallon for up to 12.5 million gallons per year and a rate of \$0.05 for the next 2.5 million gallons produced for a period of five years. The incentive applies to only the two small plants currently underway in northern Missouri and will subsidize the plant for a total of \$13.15 million during the five-year period (\$0.20 per year x 12.5 million gallons x five years + \$0.05 x 2.5 million gallons per year for five years). The legislation authorizing the ethanol subsidy was recently submitted through the year 2007. After five years of operation, the current subsidy will terminate.

In addition to the \$0.20 per gallon incentive, the legislature recently passed a tax credit (HB 888) of up to \$15,000 for investors in an NGC. In this legislation, one-half of up to \$30,000 is eligible for tax credit with a cap of \$1.5 million per entity. Thus, the GTEC plant will be eligible for up to \$1.5 million in tax credit to investors (prorated among investors). Tax credits may be carried back three years, carried forward five years, and are saleable if farmers cannot use the credits themselves. The legislation, passed by both the House and the Senate and signed by the Governor, provides tax credits which may be utilized or sold. In addition to the tax credit,<sup>11</sup> the bill provides for (1) value-added grants for items such as start-up costs and feasibility studies; and (2) a loan guaranty program for NGCs.<sup>3, 6, 8</sup>

## **Value Added Projections of the GTEC Ethanol Plant**

The estimated value-added per bushel of corn was prepared using assumptions given by members of the GTEC board and from information provided by a design engineer.<sup>2, 9</sup> They are accepted as accurate, although, as inputs vary in price, major deviations can occur. The federal exemption for gasoline tax is now in place through the year 2007, and an amortization period of seven years was used to place payout within this period (See **Tables 4 and 5**).

**Table 4. Specifications and Assumptions**

Ethanol production, gallons per year	15,000,000
Corn processed, bushels per year	5,357,142
Ethanol price per gallon	\$1.10
State Incentive per gallon	\$0.194
DDGS price per ton	\$85.00
Corn price per bushel	\$2.25
DDGS pounds per bushel	16 pounds
Total investment	\$21,500,000
Debt service amount	\$15,500,000
Shareholders equity	\$6,000,000
Interest rate on debt/amortization period	8% / 7 years
Debt Service cost per year	\$2,899,036

**Table 5. Operations Data**

Revenue from sales	
Sale of ethanol (15 million gallons X \$1.10 per gallon)	\$16,500,000
DDGS sales	\$3,642,856
State incentive	\$2,910,000
Total revenue	\$23,052,856
Projected expenses	
Denaturant	\$445,000
Corn for processing	\$12,053,569
Utilities (gas, electricity, water, sewer, etc.)	\$2,394,371
Enzymes	\$929,500
Yeast	\$220,000
Miscellaneous supplies and repairs	\$570,000
Payroll	\$900,000
Associated payroll expenses	\$200,000
Insurance/bonding	\$450,000
Debt service (principal and interest for 7 years @ 8 percent)	\$2,899,036
Total projected expenses	\$21,061,476

**Table 6. Summary Statistics**

Total projected income	\$23,052,856
Total projected expenses	\$21,061,476
Total income	\$1,991,380

Value added per bushel = Total income divided by bushels processed  
 $\$1,991,380 / 5,357,142 = \$0.37$  added per bushel processed

Value of a bushel of grain:	
Purchase price (paid to farmer)	\$2.25
Plus value-added portion	\$0.37
Value of a bushel of corn	\$2.62

Return from plant:  $5,357,142 \text{ bushels processed} \times \$0.37 = \$1,982,143$   
Return on shareholder investment (\$6,000,000):  $\$1,982,143 / \$6,000,000 = 33 \text{ percent}$   
Return per share (\$13,000 investment = \$4,290 per share [A portion of this may be retained by the cooperative for additional investment.]). This would be the portion available for distribution to each shareholder.

The values listed in **Table 6** show the potential for adding value to corn. Approximately one-half of the corn processed will be delivered by shareholders. The remainder will be purchased locally. Profits will be paid to shareholders at the end of the year, based on the total profits generated by the plant. The projections are based on an equity position of \$6 million by shareholders, and the return to shareholders is taken after all expenses are paid (including principal and interest on the remaining leveraged amount of \$15.5 million). An anticipated 10 percent or greater profit is likely to be withheld for capital and other investments needed for plant operation. The projections look very promising but will fluctuate depending on the price of corn, the price of ethanol, and the price of inputs utilized. The cash price of corn and the sales price of ethanol vary considerably and have a major impact on profitability.

## Conclusions

Land acquisition, financing, engineering, and construction for the plant are in the final stages. Groundbreaking ceremonies, attended by over 400 persons, were held on September 13, 1999. The processing of corn will commence about one year after construction begins. To date a good plan has been developed that indicates success for the shareholders, and Craig, Missouri, has the necessary attributes (land, labor, natural gas, water, interstate highway, and major railroad) to support the plant.

Although profit projections appear good, this is a high-risk undertaking and should be viewed as such. The chances of loss to an individual investor, however, are limited to the amount of money invested. The return to investors is guaranteed, as a minimum, to be 65 percent of profits and should be higher to enable taxes to be paid by shareholders instead of by the co-op. Tax credits available from the State of Missouri help reduce the risk to potential investors. Changes in the price scenarios have a major effect on profit—for example, a \$.20 increase in

ethanol price or a \$40 per ton increase in price of DDGS has a dramatic effect on the profit projections.

Investors should consider the investment in an ethanol plant as a hedging tool. In years of low corn prices, the returns from ethanol will be greater because of the lower cost of inputs to the plant. In years of higher corn prices, the return from ethanol could be less (depending on price of ethanol). The price of ethanol has varied widely in recent years and was as high as \$1.70 per gallon recently. World and economic factors have a major effect on the prices received for commodities, and ethanol and DDGS are no exceptions. The value of ethanol will be assisted until 2007 by the federal exemption of taxes for ethanol added to gasoline at a rate of 10 percent ethanol per gallon. Some plants make additional profit from processing carbon dioxide as a byproduct. The GTEC plans to market carbon dioxide, as a potential market for it exists in northwest Missouri. The availability of state incentives contributes to the potential success of this venture. Without such incentives, finding investors would be more difficult. Projections show that once operation commences, shareholders will collect a dividend each year (up to 30 percent of investment) and the plant debt will be repaid in seven years.

Assuming the success of this venture, key ingredients include a thorough feasibility study which outlines benefits, potential profitability, and regional support. This was combined with strong board leadership and the support of other agencies interested in the development of the rural economies of the state. Catholic Charities came forward with the initial venture capital that added enthusiasm to the potential success of the project. According to the board president, “another big plus for the Craig, Missouri site has been overwhelming support received from officials of Holt County and the city of Craig. Elected officials and citizens alike have been there for GTEC every step of the way. We’re happy to be locating in the area.” Such support is necessary if NGCs are to succeed in rural communities.

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1. Personal conversation with Rob Broin (ethanol plant designer) of Broin Enterprises, Inc., on May 12, 1999.

2. GTEC Board of Directors:

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# **The Role of Value-Added Cooperatives in Rural Economic Development: The Case of Heartland Organic Marketing Cooperative<sup>1</sup>**

*by Christopher D. Merrett*

## **Introduction**

Rural communities have witnessed a secular decline in the number of family farmers during the twentieth century (Davidson 1990). This decline has accelerated during the past two decades due to a range of macroeconomic forces including the interest rate-driven farm crisis of the 1980s, the vertical integration of farm production, new technology such as precision farming, and the globalization of markets (Lobao and Lasley 1995; Schaefer 1997). The negative impacts of volatile commodity markets and low commodity prices have been further exacerbated, at least from the perspective of some farmers, by the “Freedom to Farm” Act passed in 1996 (Hage 1999). This federal act cuts farm subsidies on the theory that government support undermines the efficient operation of commodity markets; however, in the current era of low commodity prices, intensified market pressures have forced many farmers out of business.

The declining numbers of farmers have impacted the rural economy and society (Hobbs and Weagley 1995). With fewer farm families living in rural communities, businesses, churches, schools, and hospitals have had to restructure or even close due to declining clientele (Hage 1999; Lobao and Lasley 1995). Because of this, some farmers are adopting new strategies to counter intensified market pressures and consolidation in the farm sector. One promising new strategy is evident in the numerous value-added or New Generation Cooperatives (NGCs) recently established in the upper Midwest (Egerstrom 1994; Merrett and Walzer 1999; Nadeau and Thompson 1996).

Cooperatives in general, and NGCs in particular, represent a local response to macroeconomic changes in the agricultural sector (English 1995). Large producers and processors can achieve economies of scale, lowering the per unit cost of production. Individual family farms are too small to match these economies of scale. In order to compete, some farmers are collaborating to form NGCs, also known as producer cooperatives (Groshen 1994). By joining forces, producers can achieve economies of scale in purchasing inputs, processing, marketing, and distribution (Duffy 1995). At the same time, NGCs allow small farmers to retain a large measure of individual control over farm operations (Boes and Rosman 1999). In short, the creation of NGCs appears to offer a successful strategy for individual producers to compete against much larger farms and agribusinesses. In the long term, NGCs may stabilize the farm population, which will in turn help to stop overall rural outmigration.

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The purpose of this case study is to examine a specific NGC to determine the reasons for its formation and to examine the obstacles and opportunities confronted during the start-up phase, the impact of the cooperative on the surrounding rural community, and the future prospects of the NGC. The underlying goal of this case study is to determine whether or not NGCs offer a promising strategy for farmers and rural communities in Illinois.

Heartland Organic Marketing Cooperative (HOMC) was chosen as the subject for this case study for several reasons: (1) its members produce crops readily grown in Illinois; (2) HOMC is located in a neighboring state with soils, climate, and community characteristics comparable to those in central Illinois; and (3) HOMC was chosen because the board members of the co-op were eager to share their experiences with us.

### **Background<sup>1</sup>**

HOMC was founded in 1992. It is located in Greenfield, Iowa, the county seat for Adair County. Greenfield is located approximately 40 miles southwest of Des Moines and about 90 miles due east of Omaha, Nebraska. HOMC started with 12 members concerned about finding dependable, long-term markets and fair prices for soybeans and corn. Currently, the HOMC has 120 members who are located in Iowa, Missouri, Nebraska, and southwestern Wisconsin. It sells organic soybeans, corn, and oats to domestic markets in Iowa and foreign markets in Japan (Miller 1997; Rosman, Boes, Miller, and Thompson 1999).

Strictly speaking, the HOMC is not an NGC. NGCs are usually established by producers who want to process crops in their community, instead of selling to an external processor. Each member of a co-op must contribute equity to build the processor. Membership also represents a contract between a producer and the NGC to sell a portion of the harvest to the NGC (Egerstrom 1994). The rationale for creating an NGC is that by processing the commodities themselves, farmers are adding value to the crop locally, instead of allowing a processor outside the community to receive the profits from processing. In short, the NGC allows value to be kept in the community, directly raising income for the members and indirectly helping the local community. It does so by converting a raw commodity into a new intermediate or final product (Stender 1994, 9).

By this definition, the HOMC is not an NGC because the soybeans and corn grown by the co-op members are shipped unchanged to market as soybeans and corn. The only “processing” done is to clean and bag the harvested crop. If, however, a more flexible notion of NGCs is adopted, which defines them as collaborative enterprises designed to help farmers increase income by moving specialty or value-added crops into niche markets, then the HOMC with its emphasis on organic crops does fit the definition. Organic crops must meet stringent quality guidelines and, therefore, require special handling separate from conventional crops that have chemical residues from fertilizers, pesticides, and herbicides (Miller 1997). It is the “chemical-

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<sup>1</sup> Material for this section came from the first and revised HOMC business plans completed by Miller (1997) and Rosman et al. (1999). I am grateful to the HOMC for sharing these documents.

free” quality and special handling of organic crops that “adds value,” earning a higher price for organic farmers.

The increasing popularity of organic crops and foodstuffs can be traced to at least two issues: (1) concern for food safety, and (2) the impact of chemical pesticides and herbicides on the environment (Simmons 1989; Whatmore and Thorne 1997). Consumers depend on state and federal standards to ensure that the food they eat will not make them sick; however, these food quality standards are not always effective. The growing concern among consumers is heightened by periodic media reports of food and water contamination by *E. coli* or salmonella.

The process of moving commodities from farm to market has in itself alarmed consumers. During the 1980s, North American consumers were warned about an array of chemically treated foods, including apples coated with alar and grapes contaminated by pesticides. More recently, wary consumers in the United States have questioned the safety of dairy products derived from cows injected with rBGH (recombinant bovine growth hormone) and antibiotics (Kneen 1999). In the United Kingdom, the threat of bovine spongiform encephalopathy (BSE), more popularly known as mad cow disease, has further increased concerns about food safety (Lappé and Bailey 1998).

The promise of chemical-free commodities to increase food safety has fueled the demand for organic produce during this decade. This demand is reflected in the fact that by 1995, 43 percent of all grocery stores in the United States stocked organic produce (Rosman et al. 1999). It is also reflected in the expansion of Iowa certified organic farmland from 24,200 to 62,000 acres between 1995 and 1997. Nationally, certified organic acres increased from 403,000 to 638,500 acres. More importantly, this increased demand translates into higher prices for farmers who grow organic crops (see **Table 1**).

Some skeptics have suggested that organic crop yields are lower than conventionally grown crops, making organic crops less profitable; however, USDA-sponsored research suggests that yields from organically grown crops are now approaching that of conventional yields. Furthermore, the premium price a farmer receives for organic produce can more than offset the lower yield per acre for certain crops (Temple 1995). Hence, organic crops have the potential to generate higher profits than conventional crops, despite the significant, but shrinking, productivity gap between them.

**Table 1. Prices for Organic Versus Conventional Soybeans, May 1998 (\$/bushel)**

<b>Grain Type</b>	<b>Conventional Prices</b>			<b>Organic Prices</b>	
	<i>United States</i>	<i>Iowa</i>	<i>Adair County</i>	<i>United States</i>	<i>HOMC</i>
Soybeans	\$6.28	\$6.19	\$6.26	\$15.00-20.00	\$18.99
Corn	2.36	2.30	2.25	3.92-5.04	5.51
Oats	1.48	1.65	1.61	2.25-2.75	2.82

*Source:* Rosman et al. 1999, 8; Gardiner and Company 1999; USDA 1997.

While concern for food safety has spurred organic agriculture, other reasons exist too. Some consumers and producers want to reduce the environmental impacts of commodity production. Chemicals used in farming are blamed for the contamination of ground water, eutrophication, and carcinogenic impacts on humans. Rachel Carson (1962) first made this point in her seminal book, *Silent Spring*. She warned that the widespread use of chemicals in a range of industrial settings, including agriculture, was a threat to wildlife and humans (Union of Concerned Scientists 1997).

The concern for chemicals in the environment is even more prevalent today. Farming methods such as no-till agriculture reduce soil erosion but require the application of herbicides on a large scale. The presence of genetically altered crops such as “Roundup Ready®” soybeans also concern consumer advocates and environmentalists (Lappé and Bailey 1998, 78). Many producers farm organically as a matter of principle, so it is a mix of altruistic concern for food safety and the environment and a selfish concern for higher profits that motivates organic farmers. It is within this context that the development of the HOMC can be understood.

### **The Start-up Phase for Heartland Organic Marketing Cooperative**

The impetus behind HOMC’s formation is a combination of market conditions, environmental concerns, and serendipitous events. The initial stimulus came from two organic farmers: Jim Boes from Greenfield, Iowa, and Ken Rosman from Harlan, Iowa. Their partnership emerged from their joint membership in the Organic Crop Improvement Association (OCIA) and the Iowa Soybean Association (ISA) (Boes and Rosman 1999). The OCIA is a national organization devoted to setting standards and keeping farmers informed about organic farming markets and techniques; and the ISA periodically sponsors meetings that bring together researchers, farmers, economic development specialists, and purchasers to promote the production and sale of soybeans.

In 1992, the ISA hosted a meeting at Iowa State University in Ames, Iowa. At that meeting, Jim Boes and Ken Rosman met a soybean buyer from Japan. This buyer expressed an interest in purchasing large quantities of organic soybeans to be processed into edible soybean products such as tofu and soymilk by food processors in Tokyo and Osaka (Miller 1997). With the promise of a large foreign buyer and guaranteed prices, Boes and Rosman (1999) set about forming an organic marketing cooperative to meet the demands of this niche market.

The decision to form an organic co-op was also based on a set of environmental and social values. Jim Boes describes himself as “a Lincoln protectionist” who worries that the vertical integration of production and increasing free trade agreements represent a threat to small farmers and rural communities. He also believes that American agribusiness, with its increasing reliance on expensive inputs and genetic engineering, represents a form of “technological imperialism” that threatens to homogenize the world food system; whereas, an organic cooperative represents a local approach to sustainable agriculture that is more likely to coexist or even help preserve local food systems and their inherent biodiversity (Boes and Rosman 1999).

In order to recruit members, Boes and Rosman (1999) mailed more than 100 letters to friends and acquaintances throughout Iowa inviting them to attend an organizational meeting. To their dismay, only two people came to the meeting. Counting themselves, they only had four members. This was an inadequate number to start a co-op because four farmers could not produce enough soybeans to satisfy the Japanese buyers. Furthermore, four farmers could not raise adequate start-up capital to build and operate an organic soybean cleaning, packaging, and marketing operation.

They bolstered interest in their fledgling co-op by making personal contacts with other OCIA members from Iowa, Missouri, and Nebraska. After much effort, Boes and Rosman (1999) managed to recruit 12 farmers to form the co-op. By 1993, the founding members had settled on an administrative structure and had formally registered and incorporated as a cooperative enterprise under code 499 of the State of Iowa Statutes (Miller 1997).

There were several challenges in addition to recruiting a sufficient number of producers into the co-op. The founding members first considered writing a business plan in order to apply for government grants and bank loans (Boes and Rosman 1999). They envisioned that they might actually establish an NGC with processing facilities. Unfortunately, start-up costs for a new soybean processing plant were estimated to approach \$19 million (Adams 1995, 17). Raising that much capital would have been impossible because in 1992, organic products were still considered high-risk “fringe” commodities. Furthermore, the founding members believed that the business plan needed to apply for grants and loans would restrict their operations by mandating what they “needed to have and do” in order to be profitable. Hence, Boes and Rosman (1999) rejected writing a formal business plan during the early start-up phase.

Of course, the lack of substantial start-up money prevented this co-op from launching a full-fledged NGC. In the words of Miller (1997), the HOMC was a “highly leveraged company with few assets” (4). The founders could, however, launch an organic marketing co-op with considerably less start-up capital. Jim Boes already had modest organic soybean cleaning and packaging facilities on his farm that could be expanded to meet the needs of the HOMC as it grew.

The founding members also established membership fees, an organizational structure, and operating practices for the co-op. The Articles of Incorporation for the HOMC, included within the business plan produced by Miller (1997), provide many insights into the internal workings of this co-op. According to the Articles of Incorporation, producers are eligible for membership if they use the services or supplies of the HOMC. Membership eligibility is subject to the final approval of the co-op’s board of directors.

Once applicants have received approval, they must purchase a membership in the co-op (Miller 1997). The first \$250 of the membership fee is converted into one share of common stock. Each member of the co-op may only own one share of common stock. Voting on co-op policy is based on the principle that one share of common stock equals one vote. No dividends are paid on common stock. Money paid over and above the \$250 membership fee is converted into purchased preferred stock at a value of one share per dollar. The co-op agrees to pay a cumulative dividend of 8 percent each year on this preferred stock. According to Shepherd and

Futrell (1982) this rate of return is typical of most American marketing co-ops (240). No additional voting rights are conferred to co-op members with the purchase of preferred stock.

Each year, the HOMC contracts with its members to purchase a certain amount of organic soybean, corn, or oat production (Miller 1997). The HOMC does not guarantee a fixed price, but it does ensure a fair price and a guaranteed market for the commodities produced by the members. In exchange for this secure market, farmers agree to meet or exceed OCIA standards. In addition to meeting standards for organic certification, farmers must also meet more conventional standards for spoilage, grade, test weight, variety, and damage (Miller 1997, 11). HOMC arranges and pays for the transportation of the harvested organic crop from the farm to the cleaning and packing facilities at the farm of Jim Boes in Greenfield, Iowa. Any crop rejected for not meeting organic or other standards is either sold as nonfood grade at a lower price or is shipped back to the farmer at the farmer's expense.

As a member of the co-op, producers can expect to earn income in the following ways. Income is earned by selling the organic crop to the co-op for a unit price that exceeds unit production costs. According to Miller (1997), this has not been difficult in recent years because the prices received by producers for organic soybeans have been up to three times higher than conventional soybean prices (8) (see **Table 1**). After purchasing the soybeans, HOMC serves as a middleman, cleaning, bagging, and marketing the commodities to processors in Iowa and Japan. Transportation costs from HOMC to the processing plants in Iowa and Japan are borne by the buyers.

The producer also has the potential to earn income from the co-op in the form of patronage distributions (Shepherd and Futrell 1982). It quite often happens that after producers are paid for their crop, money remains within the co-op in the form of "net savings." The Internal Revenue Service, however, legally defines co-ops as "tax-exempt" business entities. They don't technically earn profits and, hence, do not pay corporate income taxes. One way to understand "net savings" is that they are in effect a profit earned by the co-op, net of operating expenses.

In some ways, co-ops parallel publicly held enterprises that distribute net profits to shareholders at the end of a fiscal period (Shepherd and Futrell 1982, 241). The difference is that traditional corporations pay dividends to stockholders as suppliers of capital, who may or may not work at the corporation. A co-op, on the other hand, is formed with the explicit purpose of helping the working members, who have also provided the operating capital (Shepherd and Futrell 1982, 241). Net savings or patronage dividends are paid back to the members if the co-op has had a successful year. Net savings are generated when the value of sales and services completed by the co-op exceeds the value of operating costs (including payments to farmers for crops purchased), taxes, and interest payments on loans.

The HOMC has stipulated in its Articles of Incorporation how these net savings are to be distributed (Miller 1997). First, the co-op will set aside some savings as a reserve to pay for costs associated with capital depreciation, obsolescence, and unplanned debt. Second, money will be set aside for "retained savings." This represents money set aside for future capital improvements such as the purchase of new equipment or the expansion of operations. Third, HOMC states that

it will pay dividends on purchased preferred stock. Finally, co-op members receive any remaining money based on the dollar value of business they did with the co-op in the previous fiscal period. Unfortunately, co-op can sometimes lose money. These losses are managed in several ways. Current losses can be paid from previous savings, passed on to co-op members, or carried forward into the following fiscal year. The board of directors determines how net losses will be managed in any given year.

At this point, it might be relevant to ask why producers might rely on co-ops to market soybeans, when higher returns might be earned by selling commodities directly to processors. In some years, it is true that co-ops such as the HOMC do not always provide the highest price, but Boes and Rosman (1999) believe that there are advantages to the co-op business structure that offset this issue. First, the co-op may be better than individual farmers at finding good markets for the commodities, especially if it can hire a full-time manager (Shepherd and Futrell 1982).

Second, crop quality varies among the co-op members. This is especially true if the members are dispersed over an extensive geographic area where regional variations in climate, soil, or moisture affect farm productivity in different ways. For example, HOMC has members from 23 counties in Iowa, extending from the Missouri River to the Mississippi River. There are also producers from four counties in northern Missouri, one county in northern Nebraska, and one county in southwestern Wisconsin. With a 1999 membership extending over 29 counties in four states, the soybeans purchased by HOMC are sure to vary in quality. The advantage of the co-op is that it pools good and mediocre quality soybeans which still meet OCIA standards to improve the price received by lower-quality soybean producers (Boes and Rosman 1999).

The incentive for this behavior is that a producer might have a good crop one year followed by a bad crop the next year. In any one year, an individual farmer might receive a higher price than the co-op; however, one bad year might force an independent producer out of business. Members of a co-op are more likely to weather a poor quality harvest because the low price they might have received, as an individual, will be augmented by the higher overall quality and price of the soybeans sold by the co-op as a whole. In short, the co-op helps to spread risk for farmers over time and space.

### **Ongoing Operations of Heartland Organic Marketing Cooperative**

By most standards, the HOMC has been a resounding success. Membership in the co-op has grown tenfold from 12 members in 1993 to 120 members in the summer of 1999. The HOMC expects that at current growth rates, it will expand by about 50 members per year. This is remarkable, especially given that the transition from conventional to organic farming is so difficult. Before conventional producers can grow organic crops, they must have their fields certified as organic. This can only occur after their fields have been free of synthetic fertilizers or other chemical treatments for three years. During this transition period, it is difficult to produce a profitable crop in these fields (Rosman et al. 1999, 7).

These transition costs are not the only growing pains experienced by HOMC and its members. When the co-op began, there were no full-time employees. Jim Boes and Ken Rosman

had to manage the co-op while simultaneously managing their own farms. By 1999, the co-op had grown so much that HOMC hired three full-time and two part-time employees to handle the daily administrative tasks.

The increasing complexity of the co-op also forced the HOMC to develop a business plan in 1997, which has been revised in 1999 (Miller 1997; Rosman et al. 1999). Writing a business plan was justified by the need to borrow money to help expand operations. For example, the HOMC was forced to buy a truck to haul the grain from member farms to the processing plant in Greenfield, Iowa. It has also had to expand office space in the Greenfield facility to accommodate the growing administrative staff. Future expansion is also under discussion because the HOMC has reached its capacity of processing 200,000 bushels of soybeans each year. Furthermore, the HOMC has outstripped its on-site storage capacity of 38,000 bushels, which represents only 19 percent of its annual processing capacity. Because of the inadequate storage facilities, members are asked to store their harvested crop until it is ready to be cleaned and shipped to market.

The most recent business plan reports that organic soybeans accounted for 90 percent of HOMC sales during 1997 (Rosman et al. 1999, 10). Of this, 70 percent was sold to Mycal Corporation of Jefferson, Iowa. Mycal uses a patented “flaking” process that facilitates the conversion of soybeans into tofu and soymilk. Another 25 percent of the soybeans are cleaned and shipped directly to Japan. The final 5 percent of the soybeans are prepared for sale throughout the United States. Popcorn sales account for about 8 percent of total sales. The remaining 2 percent of sales come from the marketing of organic oats, seed, hay, and other small grains.

While the proportions of sales represented by soybeans, corn, and oats has remained constant from 1995 to the present, the total volume and value of commodities sold has increased dramatically. A cursory glance at numbers from the HOMC income statement shows that from February 1995 to February 1999, the co-op has generated a fourfold increase in sales, a fivefold increase in gross profit, a ninefold increase in net income, and a tenfold increase in members’ equity (see **Table 2**).

The reasons stated by Boes and Rosman (1999) for the dramatic growth mirror broader trends in agriculture. They see the growth of HOMC as a local manifestation of the growing national demand for organic foods, but this demand, itself, is prompting widespread restructuring in the organic farm sector. As the demand for organic commodities increases, consumers and government agencies have been attempting to understand what is meant by the term “organic.” It turns out that there is no single national standard. According to Rosman et al. (1999), only 20 states have defined organic standards (5); however, there is wide variation among these states as to what constitutes an organically grown commodity. The fact that only 11 states actively enforce their standards confuses matters further.

**Table 2. Income Statement for Heartland Organic Marketing Cooperative, 1995-1999**

<i>Growth Measure</i>	<i>1995</i>	<i>1996</i>	<i>1997</i>	<i>1998</i>	<i>1999 (estimated)</i>
Total Sales	\$435,241	\$572,594	\$889,264	\$1,277,727	\$2,000,000
Gross Profit	\$54,377	\$74,718	\$134,366	\$181,023	\$298,500
Net Income	\$3,709	\$18,076	\$24,447	-\$11,612	\$30,800
Membership Equity	\$15,053	\$42,749	\$69,795	\$63,492	\$166,272

*Source:* Rosman et al. 1999, 12-13.

State-level enforcement was adequate when organic foods comprised only a narrow slice of the local consumer market. It was sufficient for the state of Iowa to regulate the labeling and sale of organic foods when the bulk of organic foods consumed in Iowa were produced in Iowa. Now that the demand and interstate trade in organic foods has increased nationally, the varying quality of organic foods traded across state boundaries has raised concerns among USDA officials. As a result, the National Organic Program of the USDA is currently writing a set of national organic standards to facilitate interstate commerce. When national organic standards are implemented, it will create a truly national market for organic foods. In order to compete in this national market, many organic farmers are forming or joining co-ops to achieve economies of scale that they could never realize as individuals. Members of the HOMC are well-positioned to cope with the implementation of the national standards.

### **The Community Impact and Future Plans for the Cooperative**

The HOMC has increased on-farm income for its members. The question is to what extent has there been a positive ripple effect beyond the HOMC into the surrounding community? It does not appear that the presence of HOMC has significantly bolstered the farm population in Adair County. In fact, the number of farms in Adair County declined from 639 to 498 between 1992 and 1997 (USDA 1997). Despite this, HOMC has garnered a remarkable premium for its members. Prices received meet or exceed the national average for organic soybeans, corn, and oats (see **Table 1**). The impact that the HOMC will have on any specific community will be quite diffuse because of the geographically dispersed nature of the membership. The members are not concentrated in Adair County. As noted earlier, the members are scattered around four states in the Mississippi and Missouri River Valleys. Hence, the impact on community development within Adair County would be expected to be small. The wages paid to three full-time employees are important, but these new jobs in rural Adair County are not enough to offset the recent loss of 141 farm families.

However, the HOMC may significantly increase its socioeconomic impact on Adair County in the near future. The fact that the co-op has reached its processing capacity has prompted HOMC leaders to consider expanding their operations. The HOMC is negotiating to purchase the Crestland Cooperative facilities in Stuart, Iowa (Rosman et al. 1999, 14). Stuart is located approximately 14 miles north of Greenfield and 30 miles west of Des Moines, on the Adair-

Guthrie County line. Of course, this purchase would represent another corporate merger—the kind of business activity co-op members usually disdain.

Even so, the purchase of the Crestland Cooperative facilities would represent a quantum leap for the HOMC (Rosman et al. 1999). The new facilities would expand existing storage capacity from 38,000 to more than 500,000 bushels. The Crestland Cooperative also offers transportation facilities such as rail sidings and interstate highway access that are not available in Greenfield.

Processing capacities would also increase dramatically. The HOMC could expand its current cleaning capacity from 200,000 to 600,000 bushels of soybeans annually. Corn marketing could be expanded from 30,000 to 200,000 bushels per year. The expanded capacity, capital improvements, and transportation access would also allow the HOMC to seriously consider true value-added processing. In other words, the HOMC has long-range plans that include becoming an NGC. When that occurs, certainly more jobs and community development will come to Adair and Guthrie Counties.

As a final point, it may be worth considering the community development implications that the HOMC might have for rural communities in Illinois. Producers have certainly raised their incomes by selling to the HOMC; even though, the benefits accruing to producers do not appear to have had a large impact on Greenfield or Adair Counties. The great distance between co-op members precludes a concentrated economic impact. Illinois farmers can and do take advantage of the burgeoning market for organic foods; however, if community development benefits will be felt in Illinois, policymakers and economic development professionals must help foster the creation of co-ops with a concentrated membership.

Co-ops face other obstacles as well. During the start-up phase, a leader is required who has both entrepreneurial and technical skills. Entrepreneurial skills are needed to sell the idea of an NGC to other farmers, lenders, economic developers, and commodity buyers. Technical skills are needed to understand the complexities of farming as well as processing. As this case study shows, farmers did not initially rush to join the HOMC. It was only through the tenacity of the two original founders that the HOMC became operational.

Boes and Rosman (1999) believe that the hard work has paid off for them. They suggest that there are important community development benefits that naturally occur through the co-op model. In the early stages of development, co-ops attract a diverse group of farmers. There will be opportunists looking for a quick profit as well as farmers who have a more philosophical perspective on farming. When the price drops or difficult decisions must be made, opportunists quickly drop out of the co-op. Over time, attrition leaves a core group of farmers who share a common set of values based on commitment, cooperation, and mutual support (Boes and Rosman 1999). This is a solid foundation for building stronger rural communities in Iowa, Illinois, and elsewhere in the Midwest.

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## **Home Grown Wisconsin: The Story of a New Producer Cooperative**

*by Greg Lawless*

The seeds of Home Grown Wisconsin (HGW) Cooperative were planted back in the spring and summer of 1994 with a series of lunch meetings at L'Etoile, a nationally renowned, upscale restaurant in Madison, Wisconsin. It would be fully two years before HGW would make its first sale of organic produce, and another two years before the co-op would really show a profit. The four intervening years offer many lessons and insights into the process of cooperative business development. This case study presents a chronological summary of the efforts that resulted in a new farmer-owned marketing company.

### **The Beginnings of Home Grown Wisconsin**

The meetings at L'Etoile in 1994 were sponsored by a short-lived, informal organization called Local Organic Agriculture for Markets (LOAM). The mission of this Wisconsin group was to “work with farmers, restaurants, retailers, distributors, processors, etc. to improve the marketing infrastructure for handling local and sustainable agriculture products.” The core of the group included L'Etoile owner and chef Odessa Piper, organic vegetable farmers Richard DeWilde and Linda Halley, organic foods distributor Mark Dupre, his employee Joe Sonza-Novera, and Greg Lawless from the University of Wisconsin Center for Cooperatives (UWCC).

One of the main results of LOAM (which essentially disbanded later that year) was a \$1,500 survey of 301 sustainable farmers in Wisconsin, funded by Dupre and conducted by Lawless. The survey targeted farms that direct marketed fruit and vegetables, meat products, and processed foods, plus a number of organic dairy farms. The 126 farms that responded were presented in the *1995 Directory of Wisconsin's Sustainable Direct Market Farms*.

The farmers, who self-identified their status as “organic,” “transitional,” “low chemical,” etc., also indicated strong interest in a variety of marketing initiatives that were suggested. Sixty-two percent, for instance, expressed interest in a farmer-owned enterprise that processed and marketed organic produce.

Lawless used this data to support a grant proposal to the state's Sustainable Agriculture Program (SAP) in November 1994. Titled the “Farmer-Food Buyer Dialogue Project,” its purpose was to bring together farmers and food buyers (a term used to encompass restaurateurs, retailers, and institutional food service providers) to explore ways to increase local sales and consumption of locally and sustainably produced foods. The \$10,000 proposal was funded through June 1996.

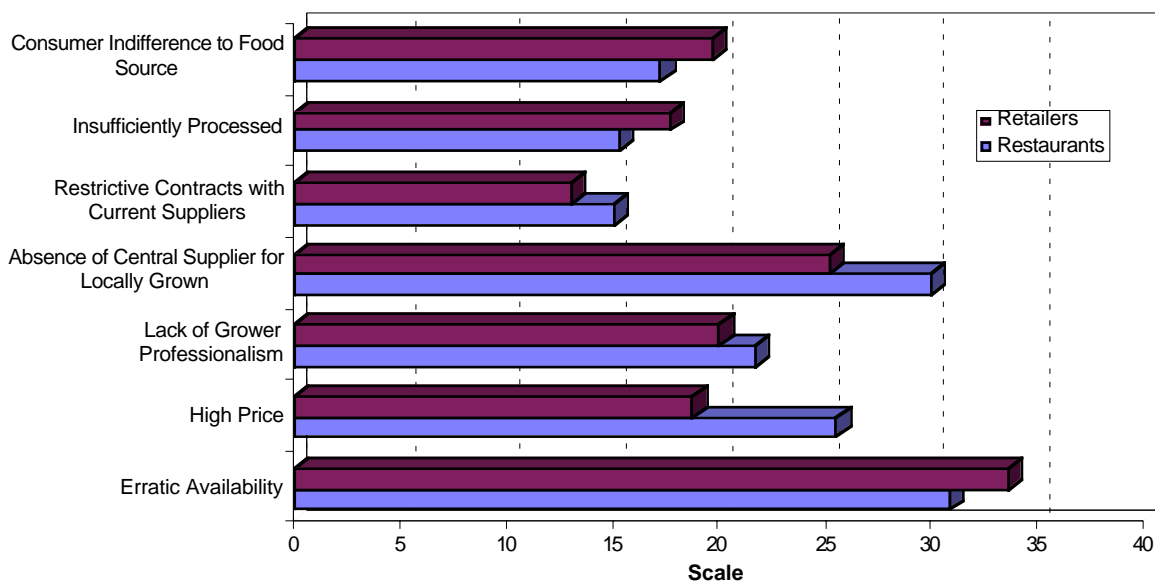
Over the next 18 months, Lawless would also receive significant in-kind support from another unit on the University of Wisconsin-Madison campus, the Center for Integrated Agricultural Systems (CIAS). A research team, consisting of Steve Stevenson, John Hendrickson, Jasia Chitaranjan, and Doug Romig from CIAS, joined Lawless in a yearlong

market research and development (R&D) effort. The goal of this research was to find out (1) whether Wisconsin food buyers valued locally-grown food products, (2) how much local food they purchased, and (3) what kept them from buying more. The team surveyed 300 food buyers, and also conducted focus group interviews with dozens of farmers, chefs, retailers, and food service providers.

Sixty-four of the surveys were returned (21 percent). After defining “local” on their own terms, 78 percent of the food buyers agreed that there was some market value in being able to tell their customers, “This food is locally grown.” The focus group interviews revealed that restaurateurs also value “sustainable” and “organic,” but more on a personal level—that is, those labels do not translate as easily into a value for most of their customers.

The food buyers also indicated what was preventing them from purchasing more local farm products (see **Figures 1 and 2**). The absence of a central supplier of these products was second only to seasonal availability as the number one obstacle. Price was also a limiting factor, but less so for some of the higher-end restaurants or the natural food groceries.

**Figure 1. Why Don't You Buy More Locally Grown Food Products?**

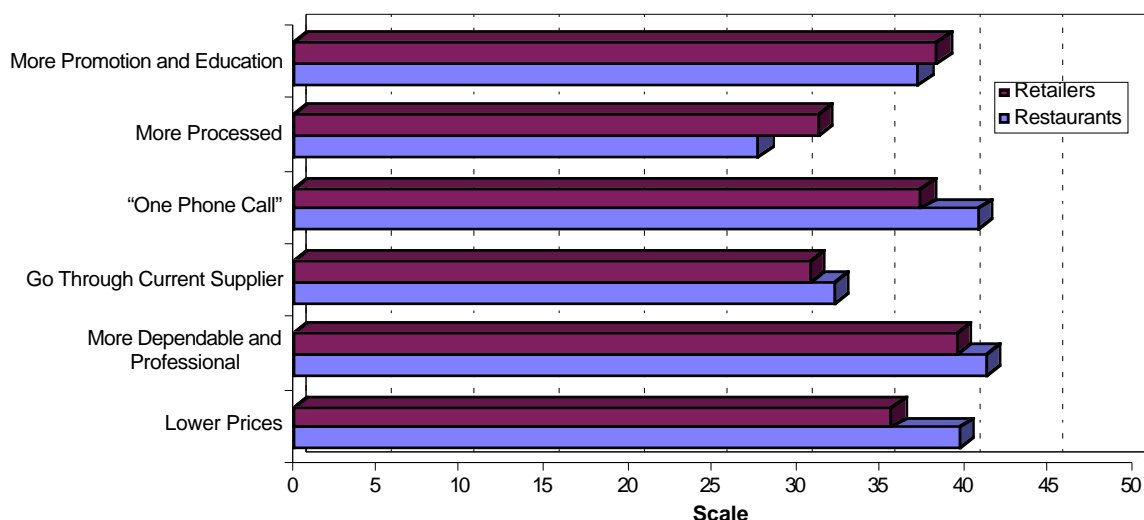


Food buyers were asked, “Why don't you buy **more** locally grown food products?” They were asked to rank each of the seven suggested obstacles presented above on a scale of 0 to 40. The higher the score, the greater the perceived obstacle. The bar chart shows averages of responses for retailers and restaurants, respectively.

*Source:* UW Research Team, R&D Survey 1996.

About the time this data was collected, the UW research team became aware of a farmer-owned cooperative wholesale business in Georgia that was marketing organic produce to upscale restaurants in Atlanta. This co-op provided a model for how many of the marketplace obstacles identified by Wisconsin food buyers could be overcome. For that reason, SAP grant funds were

**Figure 2. How Likely Are You To Buy More Local Food . . . ?**



Food buyers were asked, "How likely are you to buy more local food if each of the six improvements presented above were made in the local 'marketing infrastructure'?" Each corresponds to the obstacles in Figure 1, with the exception that no improvement was suggested to address erratic availability.

*Source:* UW Research Team, R&D Survey 1996.

used to bring the founder of Georgia Grown Cooperative, Cynthia Hizer, to Wisconsin to speak to farmers at the Urban-Rural Conference on October 29, 1995.

Hizer's presentation to a crowd of producers was far more persuasive than any survey data that the research team could provide. Her detailed and colorful description of how they were "really doing it" generated a lot of discussion at the workshop. One farmer who was very impressed was Steve Pincus, an organic vegetable producer from Fitchburg, Wisconsin. Pincus would later play a lead role in forming HGW, and would serve as its first board president.

On December 15, 1995, significant progress was made at a meeting of farmer wholesalers on the UW campus. In arranging the meeting, the UW research team targeted only producers or producer groups that were marketing fresh organic produce directly to restaurants and/or retailers. After months of research, the team had judged that this group of farmers might be ready to cooperate, and that local, organic produce would be the easiest product to get into new markets with a "buy local, buy sustainable" marketing strategy.

The participants at the December meeting included David Bruce, vegetable marketer for CROPP Cooperative; Renee Randall, marketer for an informal group of Amish producers; and four individual producers: Dan Deneen, Linda Haley (former LOAM member), Reggie Destree, and Steve Pincus. Most of these individuals already knew each other.

The purpose of the meeting was to determine if, through cooperation, and with initial support from the UW, these farmers could break into new markets together that they couldn't achieve separately. They were presented the data from the food buyer research, and they discussed several options for new marketing initiatives. Cooperatively, they could (1) market to mainstream grocery stores in Madison (several were already hitting the natural food stores),

(2) market to upscale restaurants in Madison, (3) market to upscale restaurants in Chicago, or (4) explore value-added or food processing alternatives.

While there was interest in all four options, the group felt that (1) and (4) were more difficult, requiring more capital and more momentum than the group could muster in the short term. In the restaurant market, Haley (with her husband DeWilde) was already marketing a small portion of their production to Madison restaurants, and suggested the group target Chicago. Randall, however, was already marketing most of her Amish farmers' produce to chefs in Chicago.

By the end of the meeting, consensus was reached that both Madison and Chicago restaurant markets were worth exploring, with the possibility that any new efforts in Chicago could be merged with Randall's current business. Pincus, Deneen, and Randall agreed to work with UWCC and CIAS staff to explore these options, and a steering committee was formed.

The fact that six separate farmer-wholesalers could come to agreement on exploring a cooperative strategy may be explained in the following ways. First, the "organic community" in Wisconsin is fairly small, and these individuals had come to know each other, with some level of trust and respect. This provided an opening for collaboration.

Second, while these farmers were competitors in a number of markets, it was not a fiercely competitive environment. By their own account (and bolstered by industry statistics), demand for organic foods was growing by as much as 20 percent a year. Even if some individuals eventually opted out of the cooperative effort, there was room for more players, so most did not feel threatened.

Third, everyone at the meeting was interested in expanding production and sales, but market R&D is always a drain on resources. If the UW could use SAP grant funds to support this R&D, then at this point, there was very little risk in going along with the project.

Finally, there was the Capper Volstead Act of 1922. That federal legislation provides the legal foundation for cooperative business in the United States. It gives farmers a limited antitrust exemption, which is why it was legally acceptable for these growers to meet and discuss market share and other business information, with the intent of cooperating for the benefit of their individual businesses.

### **Forming a Cooperative Venture**

In January 1996, the steering committee began to take steps to form a new cooperative. The first vegetable crops would be ready for sale by mid-to-late May, but planting responsibilities would limit farmers' time long before that. Essentially, the committee had about three and a half months to pull everything together.

Another survey was designed to send to farmers who, in the 1994 survey, had expressed some interest in cooperative marketing. It was decided to target only the southern third of Wisconsin's counties, simply for transportation reasons. In a cover letter to the farmers, the steering committee explained the proposed venture. Among other things, the survey asked what crops they might market through the co-op.

Over time, some 25 producers would show interest, and ultimately 15 would join the co-op. The survey data enabled the steering committee to create a Crop Availability Sheet, listing 94 different fruit and vegetable varieties. It also showed when each crop would be available, and that a range from one to nine farms stood behind each product.

The farmers were not asked (then or since) why they would join HGW. In the years to come, they would market between 5 and 20 percent of the produce from their individual farms through the co-op. For these sales, they would receive a wholesale price, which would be less than what they could earn marketing directly to consumers or directly to restaurants themselves.

Presumably, each farmer found it economically advantageous to market some of their produce through the co-op because they produced more than they could market through their existing outlets, and because they could not get their products into new restaurants any cheaper than the co-op could do it for them. In other words, the co-op offered an attractive complement to their existing marketing strategies.

### **Narrowing the Target Market to Madison**

That first Crop Availability Sheet would become a primary tool for engaging restaurant chefs. The earlier survey of food buyers provided estimates of how much money several restaurants had spent on local produce in 1995. Including purchases made directly from farmers and through other suppliers, 21 restaurants averaged over \$20,000 the previous year (including one restaurant that purchased \$250,000 in local foods, and excluding a local pizza chain that purchased \$2 million worth of Wisconsin cheese).

Of those 21 restaurants, 16 were in Madison. None were in Chicago. The group did have one solid contact with a nationally renowned Chicago restaurateur, Rick Bayless of Frontera Grill, but the steering committee was increasingly leaning toward a focus on Madison for the first year.

There were at least three reasons for the focus on Madison. First, while committee member Randall was already marketing to Chicago, there was not consensus to merge her business with the new co-op effort. Second, aside from Randall, the committee had no data and only one good contact in Chicago. Finally, Chicago would involve higher transportation costs and other complications. The steering committee decided to wait and see how Randall's second year in Chicago went, and to focus on Madison in the meantime. About this time, Randall stepped off the steering committee.

### **Two Individuals Step Forward**

Two individuals deserve special attention at this point: Steve Pincus and Joe Sonza-Novera. While other committee members made important contributions, Pincus and Sonza-Novera were particularly critical.

By this point, the steering committee had elected Steve Pincus as its chairperson. After some 20 years growing organic vegetables, Pincus had developed a successful business for himself by marketing directly to consumers and to groceries. Most of the production from his 20 acres of

vegetables was (and continues to be) marketed within a ten mile radius of his farm, conveniently located on the southern edge of Madison.

Pincus' personal success translated into several benefits for this co-op initiative: (1) his success earned him the respect of many other producers in the region, so he was a good spokesman for the project; (2) because his own operation had become systematized and stable, he was able to put some of his off-season time and energy toward a new project; and (3) he was willing and able to take a modest financial risk in order to build new markets and expand his production.

Twenty years prior, Pincus had been involved with the start-up of a cooperative natural foods grocery in Milwaukee, Wisconsin. His intervening years as an independent farmer did not dull those cooperative lessons, for as the months and meetings passed, his communication and process skills became very apparent. He guided the steering committee through a harrowing winter and spring of complicated planning and decisionmaking.

Joe Sonza-Novera had participated in the LOAM discussions back in 1994. Since then, he had quit his job as bookkeeper for Dupre's organic distributing company, Needs Lettuce. (Dupre was primarily marketing out-of-state produce to natural foods stores in Wisconsin.) Sonza-Novera's commitment to sustainable agriculture inspired him to contribute many volunteer hours to HGW. Eventually, he would be hired as a consultant to manage the co-op through its first year, but there were no funds to pay for his early involvement, and there were no guarantees that the venture would even get started. His background in bookkeeping and his experience at Needs Lettuce was quite valuable to HGW in its first year.

While the UW research team was also critical to this development project, they participated as paid employees of the state. On the other hand, Pincus, Sonza-Novera, and the other founders would volunteer countless hours to starting the new co-op. Without that commitment, the doors to the business would never have opened.

## **Developing Policies and Procedures**

On February 15, 1996, the steering committee held its first public meeting with farmers at a community center in Mount Horeb. About a dozen producers attended. Market data from the food buyer surveys was presented, as were the results from the recent farmer survey. The Georgia Grown Cooperative model was explained in detail.

The steering committee made it clear that a lot of work still needed to be done. Among the issues still to be worked out:

- Monitoring quality—setting standards and educating growers
- Setting prices and developing an accounting system
- Transportation and communication logistics
- Crop allocation and supply management
- Chef education—marketing and promotion

- Hiring and monitoring staff
- Organizational and legal issues— incorporation, liability, taxes, regulations, and so on

Interestingly, the list of issues presented to farmers that day did not include the financial cost of getting the co-op up and running. Perhaps the steering committee foresaw that farmers would not commit much capital to start the venture. Since the Georgia co-op was started “on a shoestring” and eventually became profitable, the committee hoped it could do the same.

Following that first public meeting, the steering committee refined four policy proposals and an operational system for the business. The first policy, called a Governing Structure, offered an unusual twist to the co-op model: both farmers *and chefs* would be welcomed into the membership. Each member would have one vote in the election of a board of directors, who would hire and oversee a manager to run the operation. The board would consist of three farmers and three chefs, and those six would elect, by unanimous consent, a seventh “tie-breaking” member to the board.

A Capitalization Policy was also designed. Each member would contribute \$75 to the cooperative as an annual membership fee. This amount was not based upon how much money the co-op needed to get started, but on how much the committee believed the farmers would be willing to risk. To date, the company has not borrowed funds from commercial lenders.

Negotiations with Sonza-Novera, who was interested in the manager position, resulted in a \$10 per hour rate for the manager’s time to run the business. Once sufficient sales levels were realized, labor and all other operating costs would be covered by the co-op’s mark-up on the produce. The trick to getting the co-op started then was to keep the fixed costs down.

A Pricing Policy stated that an average of other organic wholesalers’ prices would be the basis for what HGW would pay its members and for what it would charge the chefs. Farmers would receive 80 percent of that average price for each product, and chefs would be charged 30 percent over what farmers received. (In reality, this complicated approach was never instituted. Eventually, farmers would submit to the manager how much they wanted for their produce, and he or she would mark that up 40 percent for Madison sales, and 60 percent for Chicago, representing margins of 28 percent and 38 percent respectively. Those margins are quite high by industry standards, reflecting the new co-op’s higher costs and inefficiencies.)

A Market Boundary Policy was developed that said that any member who was already doing business with a restaurant could keep selling directly to that customer. However, off limits would be any new accounts that the co-op established that a member did not already have. This policy did not work both ways: the co-op *could* market to restaurants that any of its members had previously done business with.

In the future, this rule would be relaxed in the Madison marketplace, allowing members to compete directly with the co-op regardless of who got the account first. The rationale was that the co-op should exist to serve its members: if the members could serve the Madison restaurants directly on their own, they should be allowed to do so. However, that relaxed policy was not

extended to the more distant Chicago marketplace, where HGW would find success in future years.

Finally, an Operational Plan was developed for the business, modeled very closely after the Georgia Grown Cooperative model. Every Sunday evening from May through November, each farmer-member would fax to the manager what fruit and vegetable crops they would have available. The manager would compile these into one master product list and fax that list to the restaurants.

Chefs had until Tuesday afternoon to call in what produce they wanted to order. The manager would then fax each farm to tell it what quantities of which produce it should deliver to a common delivery point in Madison. For the first year, this was the dock of another private produce distributor, Golden Produce of Madison.

Bobby Golden, who sold conventional (non-organic) produce to upscale restaurants in Madison, did not consider HGW a competitor. He judged correctly that HGW's sales to his own customers would be rather minimal, and yet by helping to get fresh, organic, locally grown produce to his accounts, he was distinguishing his business from his true competitors.

After producers got their produce to Golden's refrigerated warehouse on Wednesday, early Thursday morning the manager would arrange it for delivery and prepare the invoices. The produce was loaded onto Golden's truck and delivered to the restaurants in Madison. Golden initially wanted to charge \$2 per box, but he kindly reduced that to \$1 at the request of Steve Pincus, whom he had known for years.

Over the years, all of these policies and procedures would be refined—some dramatically. The \$10 per hour payment to the manager, for instance, would be replaced with a commission approach (15 percent of sales). Furthermore, about 18 months after these policies were presented, the farmers would vote, and the chefs would consent, to converting the co-op into a more conventional *farmer-owned* cooperative. The chefs simply weren't interested and/or didn't have time to attend the meetings.

The development of the policies and procedures that spring did serve an important purpose: they gave farmers some level of confidence in the proposed cooperative, which by now had informally taken the name Home Grown Wisconsin. On February 26, yet another survey was sent to the interested farmers. Attached to the survey were the proposed policies. Farmers were asked if they would be willing to contribute \$75 and become a member.

They were also asked to contribute a photograph and a short biography to describe their farm. As part of its marketing strategy, the co-op would always try to highlight the individuality of its member-farms. To this date, however, plans to create a calendar, a "glossy" brochure, or web pages presenting each individual farm have never been carried through to fruition.

## **Gearing Up for Business**

In the same weeks that the steering committee was busy developing policies and reaching out to farmers, it was also reaching out to chefs as potential members and customers. On February 24, a letter was sent to the "sweet sixteen" Madison restaurants who had proven their

support of local farms in the past with their purchases. The chefs were presented with the same policy proposals that the farmers received, but it was more likely the Crop Availability Sheet that caught their attention. The letter also included a short questionnaire, which, they were told, they could fill out when an HGW representative visited them.

By this time, Pincus, Sonza-Novera, and Lawless were essentially sharing the day-to-day responsibilities of moving the project forward. The rest of the steering committee guided and reviewed their progress at several meetings through March and April. These three individuals divided up the 16 restaurants between them, or sometimes went in pairs, and met with the chefs in person.

Most of the chefs were interested. Many had recently become members of a national effort called Chefs Collaborative 2000, which was committed to supporting farmers and sustainable agriculture. Besides those idealistic reasons, the co-op did offer the promise of a professional, dependable source of a wide assortment of high-quality, locally grown produce. Some hesitated at the idea of paying \$75 and becoming a member of the co-op. They had justifiable questions about liability, for instance. They also had concerns about price—at that time they could only be offered rough estimates.

Eventually, 11 chefs did contribute \$75 to the co-op. More importantly, a number of them became involved on the steering committee, and later served on the board of directors. The direct and meaningful feedback that the farmers received from Brian Boehm, Odessa Piper (former LOAM member), Leah Caplan, and others was invaluable to the new business. In particular, these key informants advised about how to approach other chefs, about how restaurants operated, and about the quality of product and service that high-end restaurants demanded.

The questionnaires asked the chefs to indicate how much of which crops they would be interested in receiving. It did not ask them to commit to any contracts, and it's doubtful that any would have done so. But together, the questionnaires and the discussions with the key informants gave the steering committee some idea of how much of which crops would be in demand.

On April 18, 1996, HGW held its first quasi-official membership meeting. ("Quasi-official" because the business would not incorporate for several months, and would operate without bylaws for another two years!) Fifteen farms were represented. The bulk of the meeting was spent "allocating" different crops to different members. For each crop variety, the co-op needed between one and three "priority growers" to meet projected demand.

Surprisingly, there was not much conflict over this issue. It was true then and in subsequent years that members varied quite a bit in what they wanted to sell through the co-op. The earlier crop availability sheet had accurately predicted that the co-op would be able to offer a wide range of products throughout the summer.

In another interesting organizational twist, CROPP Cooperative of La Farge became a group member of HGW. While CROPP was concentrated on marketing to natural foods stores in the region, they were willing to be a "back up" supplier on any crop when HGW's priority growers fell short of demand. In the first three years of operations, this scenario rarely occurred, but CROPP's cooperative support offered a degree of security.

At the end of the April meeting, the farmer membership was officially closed for the 1996 season. One subtle effect of having an exclusive membership policy was that there was a risk to not providing quality product or not following proper procedures—expulsion from the group.

Around this time, human resources to move the project forward were running pretty thin. Farmers were increasingly being called to their fields for planting. The SAP grant that supported Lawless' involvement was drained dry. Sonza-Novera, the acting manager, could no longer contribute on a purely volunteer basis.

To address these pressures, one individual made a personal loan of \$500 to the company so that it could pay its manager until cash flow was generated. (That no-interest loan was repaid by the co-op two years later.) In addition, Lawless wrote another grant proposal, this time to the state's Agriculture Diversification and Development (ADD) program. That grant was funded for \$12,600 through June 1997, allowing him to justify continued involvement on university time.

In April and May, the last steps were taken to prepare for the coming season. The manager would operate out of his own private office space, at no charge to the co-op. (This paralleled Georgia Grown Cooperative, which operated out of Cynthia Hizer's living room in its early years.) Overnight storage and trucking would be purchased each week on a per-box rate from Bobby Golden. Remaining expenses would include the cost of goods sold, the manager's salary, a \$300 fax machine, phone bills, and assorted legal fees.

On April 15, Sonza-Novera submitted documents to get a federal ID number for the business. Come October, that paperwork would trigger bureaucratic processes that would force the organization to backtrack and prove that its manager was not an employee, but an independent contractor. The complicated issue of employees vs. consultants involves government-mandated employer costs, and penalties for failure to comply. (The following year, the co-op decided to avoid the risk of penalties and made its manager a formal employee.)

Over the course of the first year, HGW spent about \$800 on legal fees, most of it for developing Articles of Incorporation that fit with the co-op's unique Governing Structure. These Articles, plus one short form, and about \$30 were all that were needed to incorporate as a formal cooperative under Chapter 185 of the state code. Only then could the company legally add the word "Cooperative" to its business name.

The incorporated status was not granted until August, which means that the company did business for three full months without any of the protections of corporate limited liability. On top of that, it would be another year before the co-op purchased business and product liability insurance. As mentioned, the co-op's bylaws were not completed until after the 1997 season was completed. Finally, no tax reports were filed with either the state or the federal government until June 1998!

There was simply so much to be done in that first year, and so little money to spread around, that, unfortunately, shortcuts and risks like these were often unavoidable. In subsequent years, turnover in the manager's position meant that some details—like filing taxes—slipped through the cracks. This experience of HGW is certainly not something to model after closely! But

despite all of the challenges and limitations, on May 26, 1996, the co-op made its first sale of organic produce.

### **Finally Doing Business**

In that first week the co-op grossed only \$162, mainly from the sale of asparagus. In planning the season, Steve Pincus estimated that, to break even, the co-op would need to average \$1,000 in gross sales each week through 26 weeks of business. He arrived at that very rough estimate based on the costs outlined above, and a guess as to how many hours the manager would need to spend each week to arrange sales and prepare deliveries.

Looking back, his guesswork was not too far off. Unfortunately, the co-op never reached \$1,000 in gross sales in any week that first season, averaging just under \$500. Not long into the season, it became clear that most chefs were not going to place an order unless continually called, prodded, and convinced. In other words, their moral support for the co-op in April was not enough; the manager would need to aggressively market the produce.

The leadership of HGW underestimated how much work it would take to make sales each week. While the manager increased his efforts, Lawless, working under the new ADD grant, pursued new accounts for the business. He approached another 25 Madison restaurants in June and July. Sixteen showed interest, and began receiving weekly Crop Availability Sheets from Sonza-Novera. HGW's sales did increase as the season progressed, due largely to the increased selection of crops, and there was hope that the big harvest months of August and September would help the co-op catch up with its bills.

The steering committee met only once that summer, to sign the incorporation papers and to elect Pincus its interim board president. (With incorporation, the steering committee became the interim board of directors, until formal elections could occur at the next full membership meeting.) Lawless and CIAS's Hendrickson would serve as nonvoting advisory board members.

By now, however, the farmers were far too busy with their own businesses to give any attention to their co-op. To everyone involved, HGW that first year was an experiment. As one board member put it recently, "It was a laissez faire approach." Just enough was done in the preseason that year to get the business up on its feet. After a season of real business, the experiment would be judged on its own merits.

By the end of November, the co-op ceased deliveries. It had grossed only \$11,000, far short of the \$26,000 break-even estimate set by Pincus. In actuality, the co-op would have needed closer to \$32,000 in sales to avoid a loss that first year. Instead, it ended about \$3,200 in the red. The board called a General Membership meeting for November 23, and only three farmers showed up! Sales to their co-op had represented only a small fraction of most members' business that year. With these grim numbers, it was certainly difficult to judge the experiment a success.

### **Giving It Another Shot**

Over the next four months, the board of directors studied the 1996 season and considered several issues. Pincus made a strong case that, despite the \$3,200 loss, the operational plan (the

system of faxes and deliveries) had run very smoothly. Having set that system in place, it might be worth giving it another chance.

Second, they had to decide how to handle the \$3,200 loss. They proposed dividing the loss among the farmer members, in proportion to the sales each made to the cooperative. As the largest of the farmers involved, Pincus had sold more than double any other member, and his sales represented a third of the co-op's business in 1996. When he agreed to take on the largest share of the debt, most of the other farmers were willing to follow suit—with the hope of being repaid eventually out of future co-op profits.

Third, to become profitable, the board knew that it had to improve in one major area—marketing. It needed to find new customers, and once found, they had to get a much harder sales pitch each and every week. The board took two important steps to address this issue: it decided to target Chicago restaurants for new business in 1997, and it hired Judy Hageman as its manager.

Of course, the idea of marketing to Chicago had always been there. Now that the co-op had developed a working system of fax communication and deliveries, it was more willing to leap into the larger Chicago restaurant scene. An earlier connection with restaurateur Rick Bayless led to two meetings with him and other Chicago chefs in January and February.

In these meetings, Pincus and Lawless found that several chefs were not happy with their experience dealing directly with farmers in recent years. Even more than the Madison chefs, they demanded top quality produce and very professional service. They were presented with an updated HGW Crop Availability Sheet. When they heard that the co-op had done business for a year with 14 respectable restaurants in Madison, they expressed strong interest.

However, like the Madison chefs, they would not sign contracts and were somewhat vague as to what they would order. But their volume of sales and their menu prices far exceeded most Madison restaurants. It was becoming clear that Chicago would be the key to HGW's success. There were logistical issues to sort out—namely transportation—but it was the co-op's best and only hope.

After Sonza-Novera resigned as manager to take another job, the board hired Judy Hageman around the end of March. Hageman brought to the co-op not only her exceptional marketing skills, but also her connections. She and her husband Bill raised early season crops under hoop houses, and were already marketing their high value products to several top Chicago restaurants. She was certainly not intimidated about making weekly calls to chefs and “pushing product.” Hageman agreed to work for HGW on a percentage basis—15 percent of sales.

Having hired Hageman so late in the winter, the co-op's second season began almost as chaotically as the first. Not only did she have to learn an unfamiliar business; she had to take that business into an entirely new market.

Despite these challenges, Hageman and the board prepared well for the 1997 season. They were able to secure weekly transportation from Madison to Chicago: an independent trucking firm owned by one of the co-op's original farmer-members, James Welch. The drop-off point for

both Madison and Chicago deliveries was moved from Golden's warehouse to Pincus' farm, a more convenient location with a new cooler that Pincus rented to the co-op.

At the same time, still supported with ADD grant funds, Lawless did a thorough comparison of the co-op's 1996 prices against other organic distributors. There was a lot of variation: with some crops HGW was high, with others quite low. In some cases, adjustments were made. Lawless also visited each of the Madison restaurant customers, and he created a crude brochure for promoting the co-op. Meanwhile, Hendrickson of CIAS was making contacts with the food service program at the university in Madison, offering a potential new market to the co-op.

With the hiring of Hageman and the prospects in Chicago, most of HGW's farmer-members rejoined for year two. The few that resigned were replaced by new members. Once again, crops were allocated among the 15 farmers. By the end of April, Hageman was already making sales of watercress, as well as potatoes stored from the previous season. As the season progressed, sales in Madison increased somewhat over 1996, but it was the trips to Chicago that made all the difference. In one week alone, a single Chicago restaurant purchased more than all of Madison combined.

By the end of the year, Hageman had sold \$60,000 in produce, nearly a sixfold increase over the first season. Another winter of meetings, adjustments, planning, and customer visits was followed by a third season that reached \$100,000 in sales. The debts incurred by the farmers that first year were all repaid, and the business finally had a surplus to worry about. By the end of 1998, however, Hageman announced her resignation. The challenge of running the co-op on top of her own farm and her family responsibilities proved too much for her.

Fortunately, Rink Davee took over where Hageman left off. Davee brought a wealth of experience to the job. He once worked for Chez Panisse a nationally renowned restaurant in Berkeley. He worked for years as the produce manager at a natural foods store in Madison. He quit that job to become an organic vegetable farmer, was an original member of HGW, and served for a time as its board president. Under Davee's leadership, halfway through its fourth year of business, gross sales for the co-op are on a steady incline.

### **Some Closing Thoughts**

An alternative title to this case study might have been "Home Grown Wisconsin: How NOT To Start a Successful Cooperative!" Looking back at those early years, it is hard to admit all the short cuts and mistakes. It was a chaotic experience. Rather than focusing on what went wrong, however, it will be useful to briefly consider what contributed to the co-op's success.

First and foremost, it was the people. The dozen or so individuals who made substantial contributions to the project not only offered their talents and their time, but they got along with each other. That's not to say that there weren't difficult moments, but respect and friendship have continually strengthened this cooperative venture.

Other contributing factors included grant support from the state; market research; market demand; high-quality produce; professional service; and finally, *marketing, marketing, marketing*.

Without the support of two grants totaling \$22,600, the project simply never would have happened—period. That money made it possible to conduct the market research that showed there was a demand for the co-op's product. It enabled Lawless to support Sonza-Novera and then Hageman in developing initial relationships with restaurant chefs.

Obviously, if those chefs did not purchase the co-op's products, the business would have failed. Fortunately, there appears to be a growing appreciation among many restaurant chefs, and presumably among their customers, for fresh, high-quality, locally grown farm products. Furthermore, by developing a working system of communication, transportation, and accounting, HGW was able to offer a level of professional service that all restaurants demand.

Finally, the farmers of Home Grown Wisconsin Cooperative have come to realize that it is not enough to produce good food. You must also find someone to buy it—preferably at the highest possible price. That requires a marketing strategy that involves continuous research, risk-taking, and promotion. Even in the midst of the current season, the HGW board met recently to discuss their experiment with a new organic farmers market in Chicago. They hired a new part-time employee to revisit chefs in Madison, where sales have been slipping. And they're finally getting around to developing that glossy promotional brochure, highlighting the unique character of each member farm.

## Northern Vineyards Winery

*by Lee Egerstrom*

The Minnesota Winegrowers Cooperative, a grape and wine co-op formed in 1983, has evolved to a point in its business life where it now provides the economic benefits sought by its founders. Given its geographic location, it provides equally important societal benefits for its primary community and for the scattered communities in Minnesota and Wisconsin where its members reside. Looking forward, it is certain to provide additional, intangible benefits for society by serving as a model for communities seeking wealth-creating economic development or preservation of farmland and green space from urban sprawl. In fact, this is already happening. Groups of people as diverse as suburbanites around Columbus, Ohio, to economic planners assisting the privatization of state-owned property in Hungary are considering efforts to replicate the Minnesota Winegrowers model.

This case study examines the co-op and its business unit, Northern Vineyards Winery; the geographical environment, including area demographics and economics; members, and how they function within a cooperative society; and the obstacles they have overcome. At the same time, the analysis will identify the societal benefits of using the co-op's model to promote land preservation, resource diversification, and community economic development.

The Minnesota Winegrowers Cooperative and its Northern Vineyards Winery business unit deserve attention from farmers, community developers, economic planners, and potential investors in a community-based enterprise of nearly any ownership structure. Not every community or region needs a winery. Most areas of the country are capable of producing a wine grape; fewer, however, are capable of producing a wine of marketable quality. The relevance for studying Northern Vineyards Winery is that most areas have some land resources capable of supporting a unique crop or manufactured product that would have economic value for investors and the resident community.

### The Cooperative

The Minnesota Winegrowers Cooperative, doing business as Northern Vineyards Winery in Stillwater, Minnesota, was founded on the east edge of the Minneapolis-St. Paul metropolitan area. Following the historical pattern of most producer-owned co-ops worldwide, it started from a purely *defensive* position—that is, the growers were faced with a *market failure* or *market imperfection* (Egerstrom 1994).<sup>1</sup> The ten founders lost their grape market when an existing winery changed its business strategy and began making different wines from new grape varieties grown in its own vineyards. The founders had little choice but to create a market for their grapes. The choices were to create their own, privately owned and operated wineries, or pool resources to create a business venture with greater scale and scope, either as an investor-owned firm (IOF) or incorporated as a co-op (Egerstrom 1998a).

One member created a winery but quickly learned that he now had three part-time jobs: (1) grape growing, his intended hobby and part-time activity; (2) winemaking; and (3) wine

marketing and retailing.<sup>2</sup> Such large investment in time and money did not appeal to other growers. They chose instead to band together and form a co-op as has been the typical response of growers and farmers in Minnesota and Wisconsin during the past century. In this case, however, the market failure was so complete that a handling and marketing co-op along the lines of early dairy and grain marketing co-ops would not be sufficient for their needs.

Faced with this market failure dilemma, they created what co-op specialists call an offensive strategy co-op patterned after the three Minnesota and North Dakota sugar beet co-ops in the region that are usually considered among the original New Generation Cooperatives (NGCs).<sup>3</sup> In generally accepted terms for describing co-ops, traditional co-ops that set out to correct market failures are considered to have defensive strategies, given their objectives. NGCs, in contrast, are considered offensive co-ops in that they seek ways to generate greater income for members' products in the markets. This is achieved from value-added processing and manufacturing and, in some cases, by providing higher-valued services to members and customers.

Each original member invested \$2,000 to form the co-op, giving the company \$20,000 in start-up capital. The original winery operator, David Macgregor, also donated his winemaking equipment as an initial investment in the firm. After incorporating as the Minnesota Winegrowers Cooperative, members donated time to assist Macgregor in making the wine. In its second year, 1984, the co-op rented space in an old warehouse in downtown Stillwater where it continues to house the winemaking equipment, store wine inventories, and operate a retail shop. Northern Vineyards Winery, the business unit of the cooperative association, was born. Sales of wine have increased at an annual average rate of 15 percent since the first wine was marketed in 1984.

Initial investments by founding members have been repaid along with a small, annualized interest payment on their initial investment. More importantly, the growers have been able to restore Northern Vineyards' grape payments to co-op members at a rate of \$.50 per pound, the price necessary for members to keep and maintain the vineyards after the original market disappeared. Since 1990, the co-op has also been able to make payments to members from profits generated by the winery. For example, a former University of Minnesota medical school professor who has 2.5 acres of grapes on his rural estate now receives annual payments of \$7,500 for his grapes and \$600 in annual patronage payments that reflect his equity stake in the co-op's profits.

### **The Co-op's Benefits to Members**

The income received is sufficient for members to supplement household incomes and keep vineyards intact on country estates surrounding the Twin Cities metropolitan area and near Minnesota communities. In doing so, Minnesota Winegrowers Cooperative is responsible for two streams of income received by individual members: (1) it creates a market that rewards growers for grapes and (2) it rewards membership and cooperative behavior by providing a stream of income from the co-op's success, as measured by its profits.

No member has become wealthy by belonging to the co-op, observes Robin Partch, a science and elementary education teacher who has become the chief winemaker for the co-op.

Prospects of a financial return from what is essentially a farming hobby, however, encourage members to stay in the co-op and retain their rural farm estates while enticing other rural property owners to join the firm and grow grapes. So far, it has worked. The founders' initial stock offering was valued at \$10 per share. Each share provides delivery rights—and implied delivery obligations if growing conditions permit production—of 100 pounds of grapes. While each member has a delivery obligation, the co-op carries the risk that drought or other weather conditions may preclude some or all members from delivering their quantity in a given year. Shares are sold in blocks so each member has rights to deliver at least 500 pounds of grapes.

After the initial subscription, or offering, the share price fell predictably to only \$5 per share. This often happens with initial offerings of IOFs. Some initial members sold their stock back to the co-op, and new members were found to buy the stock. The stock was valued at \$27 per share in 1998 and reached a high of \$30 per share in 1999. At the start of 1999, the co-op had 16 full-fledged owner-members and had contracted with six other grape growers to deliver grapes to the winery. The contract growers receive the same \$.50 per-pound payment for the grapes but do not share in the winery profits.

According to Partch, the contract growers have indicated that they will join the co-op in the future, rolling profits from grape growing into stock purchases. Moreover, some of the newer growers are entering the co-op with an offensive strategy of their own. They view membership in the co-op as a way to assure multiple streams of income to their households, not just as an income stream to cover costs of their grape-growing hobbies or to keep their rural estates near urban communities.

## **Reasons for Success**

### **The Geography**

Northern Vineyards Winery has been successful during its first 15 years of operation for reasons that combine good luck and good people. The latter will be considered in a later section on members. The good luck comes, in part, from geography and the timing of the people's actions to utilize their land resources. Stillwater, Minnesota, is about ten miles straight east of St. Paul, and between 20 and 25 miles east of downtown Minneapolis. It is a historic frontier river town, the oldest continuing municipality in Minnesota, and a port city on the St. Croix River. That river is the border between Minnesota and Wisconsin to the east and north of St. Paul. It merges into the Mississippi River at Hastings, about 20 miles south of St. Paul, where the larger river takes over as the border between the two states.

Stillwater's importance for river navigation ended more than a century ago, but it is still important for river recreation, the city having one of the few bridges that cross the scenic St. Croix. As a result, Stillwater is a bustling tourist town and a recreation crossing point for Twin Cities area residents en route to Wisconsin lakes, resorts, and other recreation activities. It is also a daily crossing point for thousands of Wisconsin residents who commute to jobs and attend entertainment or business meetings in the metropolitan area. Three border counties of Wisconsin

have become extensions of the Twin Cities metro area and will likely be identified as members of the Minneapolis-St. Paul Standard Metropolitan Area (SMA) in the near future.

The location provides an opportunity and a challenge for Northern Vineyards Winery. On the plus side, it has both a residential and transitory clientele for its wine as people pass through Stillwater on daily commutes or on weekend outings. Along with wine sales at liquor stores in the Twin Cities, it has a customer base capable of buying its annual production with minimal marketing costs. This works as long as the wine is of a pleasing quality; so far, the winery has made high-quality wines. On the negative side, however, is the attractiveness of the region. The same desirable features that produce visiting customers for wine also produce new immigrants to the river bluffs, green spaces, and former farms on both sides of the St. Croix River. These immigrants bring with them, or are preceded by, real estate developers who measure farms in lots rather than acres. Washington County, the county surrounding Stillwater and reaching to the first-ring suburbs of St. Paul, has had Minnesota's fastest growing population since the mid-1980s.

Not all 16 members and six contract growers for Northern Vineyards Winery live in this scenic area that is now the magnet for urban sprawl. Nevertheless, some of the more distant members, whose vineyards are near other river towns; the medical center at Rochester, Minnesota; and lake resort developments in northern Minnesota, are experiencing similar land use and land cost pressures on their vineyards/farms. The result is that all members face rising costs for holding onto their land, be it from rising property taxes, pressure to sell as a result of rising land values, or a combination of both.

Given that environment, most members entered the co-op seeking an income source to sustain their increasingly expensive hobby. "I don't think it was anyone's intention to make money on our grapes," said member Howard Krosch, a retired aquatic biologist at the Minnesota Department of Natural Resources who operates a vineyard near Stillwater. "It was more a matter of trying to find a way to make money from our hobby so we could afford to grow the grapes" (Egerstrom 1998a, 1E). While a seemingly modest objective, the goal relies on the same NGC strategy used by corn grower co-ops that attempt to produce greater returns on labor and investment by converting corn into higher-valued ethanol fuel, pork, or egg products for the food industry. In the case of the grape growers, the goal is to convert a hobby expense—grapes—into a higher-valued and profitable consumer product—wine.

## **The Winery**

The winery tells customers in promotional brochures that there is no reason why grapes and wine cannot be produced in Minnesota. The Twin Cities are at the same latitude as the Bordeaux region of France (45 degrees North), "and several hundred miles farther south than the great Rheingau region of Germany" (Northern Vineyards Winery 1997). It doesn't mention that parts of Russia's Siberia have the same latitude, and that no one considers Siberia to be a prime wine region.

The winery acknowledges that Minnesota isn't exactly like Bordeaux. The state has what geographers call a continental climate. France and Northwest Europe have a marine, coastal climate:

Early autumn frosts often cut short the growing season here (Minnesota). The severe winters sometimes damage even the hardiest of grapevines. The noble wine grapes of Europe can neither ripen their fruit here nor survive our winters. So the challenge to Minnesota grape growers has been to find alternative grape varieties that can be grown within the limits imposed by our climate. (Northern Vineyards Winery 1997)

This it has done, the winery proudly notes, through adaptation of French-American hybrid grapes and by breeding improved varieties such as those produced during the past 50 years by a plant breeder who is a member of the co-op. To further maximize its resources, the winery has also started making dessert wines in recent years that are fermented from native American wild grapes that grow along Minnesota and Wisconsin river banks.

Wine drinkers who have not visited Minnesota or western Wisconsin in recent years will recognize only the names of French-American hybrid grapes identified in the wines. It is unlikely that the uninitiated will have heard of the locally produced grapes, but that will change. The original winery in the area, Alexis Bailly Winery, and two new, privately owned wineries, have started, since 1996, to produce wines from successful new grape varieties. The current Northern Vineyards Winery portfolio of wines include three new offerings:

1. *Frontenac*—A full-bodied dinner wine from the Frontenac wine developed by the University of Minnesota.
2. *Ruby Minnesota*—A fortified, red dessert wine made from wild riverbank grapes.
3. *Mainstreet Red*—A semisweet, fruity red that is a blend of local grapes with Foch grapes brought in from Michigan.

The main wine portfolio, however, includes Northern Vineyards-bred varietals named St. Croix, Oktoberfest, a Pinot Noir hybrid, Leon Millot, and Prairie Smoke; and blended wines that include grapes imported from Michigan, California, and other U.S. wine regions. These latter wines include such names as Columbine, Yellow Moccasin, Syval Blanc, Ladyslipper, Prairie Rose, Rivertown Red, Ram's Head Red, and Downtown Red. What local residents and tourists recognize is that these wines salute native wildflowers that grow in the area or Stillwater historical sites.

## **Production and the Wine Market**

Wine production in the U.S. is measured in English gallons for alcohol tax reasons. A gallon of wine in the cask produces five internationally standard 750 ml bottles. Partch explains that the winery had to produce 4,000 gallons or 20,000 bottles of wine per year to break even financially, given necessary labor requirements, licenses, insurance, taxes, and rents for winery and retail space. The break-even point is based on wine prices ranging from \$6 to \$11 per bottle, with average prices for the portfolio of wine ranging from \$6.50 to \$8 per bottle. Members of the co-op donated time working in winemaking, retailing, and promotion until the winery's break-

even point was achieved in 1990. The 1997 grape crop generated 50,000 bottles of wine, and the winery sold about the same amount of wine from previous years' inventories, producing gross revenues of \$340,000 for the winery in 1997. Strong winter sales, showing the development of a year-round market, pushed sales to \$400,000 in 1998. Most work at the winery is now done by paid employees.

There is plenty of room in the wine market for Northern Vineyards Winery to grow but not enough room for it to be a major player in the national wine market. Per capita consumption of alcoholic beverages in the U.S., as in most developed countries, is in decline. The exception, however, is a slight but steady increase in wine consumption. In part, these gains represent a shift in consumer preferences away from distilled spirits and beer. It is more complicated than that, however, and it does signal that people enjoy more wine with meals in their homes. On the surface, this trend seems to conflict with a broader food industry trend that sees Americans continuing to eat more of their meals away from home. The greatest increase in away-from-home eating is at fast-food and casual dining restaurants where little if any wine is sold.<sup>4</sup> The National Restaurant Association and private food industry research now estimate that 55 percent of American meals are consumed away from home. On the back side of this trend is rapid growth in prepared foods brought home for quick and diverse meals for busy people who have neither the time nor the inclination to cook meals from "scratch." This trend, called "home meal replacement" foods by the food industry, probably contributes to the increase in U.S. wine consumption (Hughes 1996; National Restaurant Association 1999).

**Table 1. U.S. Wine Consumption, 1993-1998**

<i>Year</i>	<i>Total Wine Per Capita<sup>1</sup></i>	<i>Total Wine Per Million Gallons<sup>2</sup></i>	<i>Total Table Wine Per Million Gallons<sup>3</sup></i>
1993	1.74	449	381
1994	1.77	459	395
1995	1.79	469	408
1996	1.90	505	443
1997	1.95	523	462
1998	1.96	531	462

<sup>1</sup>Data for 1999 were not available. The Wine Institute's industry surveys forecast that per capita consumption would stop growing in the year 2000, although a larger population would cause growth in consumption volume.

<sup>2</sup>Total Wine category includes vermouth, sparkling wines, dessert wines, and other special natural wines.

<sup>3</sup>Total Table Wine includes wines not more than 14 percent alcohol.

*Source:* The Wine Institute, various years.

In the 16-year history of Northern Vineyards Winery, Partch said winemaking has followed essentially the same industry trends as food and beer. Market dominance has been concentrated in a few large companies. The concentration in wine is not as pronounced as in the beer industry in which Anheuser Busch and Miller Brewing companies account for about three-fourths of all beer sold in the domestic market. In contrast, Partch reports that five or six commercial winery

companies control slightly more than 50 percent of the U.S. wine market. The remaining market is shared by an expanding number of small and regional wineries and imports from Europe, South America, and certain wine exporting countries in Africa and Oceania.

Just as there are writers who desire to write “the great American novel,” there are increasing numbers of people who desire to make the perfect American beer or perfect American wine. New breweries are springing to life all across the nation while large national breweries continue to merge or fold. The Stroh Brewing Company, the nation’s fourth-largest brewery, became the latest major brewer to cease operations when it decided in 1998 to sell its beer brands and assets (Steinman 1996, 1997, 1998). Meanwhile, many of the new breweries are attempting to make Belgian style, handcrafted beers, usually selling into regional markets. Others are simply making a beer and trying to market it with a clever label or tie it to a locale.

The new wineries, in contrast, do seem to be serious attempts by serious hobbyists and entrepreneurs to produce unique, quality products. When Northern Vineyards Winery started operations, about 400 wineries held tax licenses in the U.S. According to Partch, in 1998, the number had more than doubled to about 900 wineries. Owning vineyards has become especially popular with motion picture and entertainment figures in California, he noted. Winery ownership now includes such personalities as the Smothers Brothers and movie producer Francis Ford Coppola. Heirs to industrial fortunes have done the same, including a Maytag family member from the home appliance manufacturing firm of that name and a Firestone family member from the insurance and automobile tire industries.

This trend of starting new wineries in California can also be found in the Upper Midwest states: Wisconsin has a small number of local wineries scattered among its regional brewery locations, and Minnesota, which had no commercial wineries three decades ago, now has at least six that bring products to market, and two more produce grapes and wine that were set to begin marketing in late 1999. A few are extremely small and produce fruit wines for tourists in recreational resort communities. The Alexis Bailly Vineyards, which is also near the Twin Cities along the St. Croix and Mississippi river bluffs, is about the same size as Northern Vineyards Winery and may be slightly larger in production and sales volume. A new winery will soon join the Northern Vineyards and Bailly wineries as a serious commercial enterprise. Morgan Creek Vineyards was created in southern Minnesota during the 1998 growing season and is owned and operated by members of the Marti family of the August Schell Brewing Company at New Ulm. That brewery has made a high-quality line of regional beers for 150 years under the guidance of five generations of Schell-Marti family members.

There are clear signs that the domestic beer market is “overbuilt” and that future shakeouts of large and small breweries can be expected. The wine industry may not sustain any more large, national wineries than the domestic beer market sustains national breweries, but the wine market is still in a growth mode. The commitment to quality by upstart new entrants in regional wine markets probably serves to build consumer interest in wines and brightens prospects for continuing growth at Northern Vineyards Winery.

## The Members

Without a doubt, the most difficult and unquantifiable element holding a cooperative business venture together is the commitment of its membership. In this regard, Minnesota Winegrowers Cooperative has been especially lucky, says Allen Gerber, the former president of the Minnesota Association of Cooperatives who gave the winegrowers technical assistance in the beginning stages. The co-op had extraordinary people with grape growing technical expertise to make the winery a success, he recalls. At the same time, Gerber admits that he doubted these busy and talented people would remain committed to making Northern Vineyards Winery an ongoing concern.

*A Qualification.* Most co-ops formed in the U.S. were started by people with knowledge of their industry. For instance, farmers started agricultural co-ops when they recognized that part of their markets were not functioning properly or in their best interests. Gerber suspects that this inherent knowledge of the market helps explain why cooperative business ventures have had far higher survival rates during the past century than have businesses started by individual entrepreneurs and venture capital investors. In general, fewer than 50 percent of new business ventures survive for three years in most business sectors. Gerber adds that business schools do not track the failure rate of cooperative businesses separately from other entrepreneurial ventures, but he knows from personal experience gained from cooperative association work that more than 90 percent of the co-ops that have started in the Upper Midwest states during the past 30 years have survived or merged into other co-ops. Many co-ops chose to go out of business during that time, he said, by merging into larger, stronger regional co-ops. Such mergers and consolidations came as members understood their markets, not because of economic failure of their firms. The grape growers who started Minnesota Winegrowers Cooperative were kindred spirits of the founders of other producer-owned co-ops, and they, too, possessed knowledge of their market. These founders, however, were also extremely busy professional people, major commodity farmers, business executives, and private entrepreneurs. This raised questions in Gerber's mind about the eclectic group's willingness to do the work and support a new venture.

Looking back, the founders were fortunate for the expertise their members possessed and for the advice they secured from outsiders. One founder, the physiologist at the University of Minnesota Medical School, took a group to see Gerber at the Minnesota Association of Cooperatives office in St. Paul. Gerber provided basic information on the structure, governance, and tax implications of cooperative businesses incorporated under the Capper-Volstead Act. He contacted an attorney with a St. Paul law firm that had the longest continuing cooperative law practice in the nation. The attorney, who later became vice president and general counsel for the St. Paul Bank for Cooperatives, was equally intrigued by the group's intentions. The group wanted to start an NGC with a closed membership structure ten years before NGCs were named and defined.<sup>5</sup> In addition, the founders pledged their time to winemaking chores and staffing retail and marketing operations as part of the initial investment. This made Minnesota Winegrowers Cooperative a mixed co-op that would be both producer-owned and worker-owned.

Also, wine is a fun or romantic-type product. “I thought I might want to someday buy a small farm outside the Twin Cities and join the co-op,” attorney Phil Erickson recalls.

*Seeking Expertise.* The attorney incorporated the grape growers under Minnesota and U.S. cooperative laws. The group then reached out for additional founding members and expertise. They succeeded in bringing in one of the most extraordinary plant breeders in the Upper Midwest, a farmer at nearby Star Prairie, Wisconsin. His experiments with crops, especially his efforts to perfect a table grape for the Upper Midwest, caught the attention of the University of Minnesota, and he was given a plant breeding research position with the university Department of Horticulture. The gifted plant breeder had no interest in wine or alcoholic beverages prior to his recruitment into the co-op, but by his coming to the aid of fellow growers, the co-op members and other grape growers in Minnesota and Wisconsin now have four unique grape varieties that make excellent wines, two more under development, and hybrid grapes which have been bred to withstand the harshness of Upper Midwest winters.<sup>6</sup>

The reach for expertise went downstream from grape genetics. As already mentioned, in the first year, the winemaking talents of a founder who was already operating a small winery were used. That member worked with two other members and then turned winemaking chores over to them in the second year. The lead winemaker at that point was a food scientist for General Mills Inc., the multinational food company based in the Minneapolis suburb of Golden Valley. His understudy was the science teacher Partch. The latter took over lead responsibilities when the food scientist was transferred to another General Mills location away from the Twin Cities. The winemakers became paid employees as well as members. The other original members donated time to help with bottling the wine and operating the retail store.

*A Shift in Attitudes.* The co-op is now moving into a second generation of members. While the founding generation was primarily interested in creating a market to continue growing grapes and to provide an income stream to justify the expense of this hobby, the second generation is showing business attitudes consistent with members’ goals in other NGCs. One member, who lives in a rural area near Stillwater, said she wants her small vineyard to become an important income source for her preferred country lifestyle. She has grown children, went back to complete university studies, and began working in the retail shop at the winery. She liked the work and the people, so she started growing grapes to supply the winery. That led her to buying a membership. “The perfect career for a liberal arts education,” she said jokingly.

While the co-op is in a transition period with new members joining, fun and camaraderie exists with a bond of both financial and emotional investments in the cooperative “community.” A common bond of shared interests binds the members even though members’ reasons for belonging are changing.

## **Demographics and Economic Development**

The diverse collection of business, professional, and farm people in the Minnesota Winegrowers Cooperative may not be unique, given changes occurring in rural America. It might be wise for community leaders to take a local census of who lives on the farmsteads and who

owns the surrounding land. Common perceptions of the American farm and of American farm households bear little resemblance to the reality found in 1995 surveys and published in May 1998 by the Economic Research Service (ERS) at the U.S. Department of Agriculture (Egerstrom 1998a).

Key points in the ERS findings are that only 14.2 percent of small farms—those with revenues of under \$250,000 annually—derive returns equal to average U.S. household income, and only 17.6 percent of all American farms generate household income on par with all households. While 70.5 percent of larger farms with more than \$250,000 in annual farming revenue do achieve or surpass average U.S. household income, there are only 123,000 such farm business entities of a total 2,068,000 farms.

**Table 2. Characteristics of U.S. Small Farms Differ Markedly from Large Farms**

	<i>Small Farms (sales less than \$250,000)</i>			<i>Farms with Sales of \$250,000 or More</i>	<i>All Farms</i>
	<i>Less than \$50,000</i>	<i>\$50,000 - \$249,000</i>	<i>All Small Farms</i>		
Number of farms	1,531,760	413,431	1,945,190	122,810	2,068,000
Share of all farms (percent)	74.1	20.0	94.1	5.9	100.0
Value of production (percent)	9.5	31.3	40.8	59.2	100.0
Average gross cash farm income (U.S. Dollars)	12,482	117,320	34,764	686,606	73,474
Average net cash farm income (U.S. Dollars)	-1,702	23,159	3,582	152,724	12,439
Farms able to generate returns equivalent to average U.S. household income (percent)	7.6	38.8	14.2	70.5	17.6

*Source:* ERS 1995.

The Midwest states have a disproportionately high number of the commercial farms that achieve national household income standards from farming, but even in Iowa, Illinois, Indiana, Nebraska, and Ohio, farming is becoming more of a part-time vocation that supports a preferred rural lifestyle. The motto of modern agriculture is changing from, “Don’t give up the family farm!” to “Don’t give up your day job!” (Egerstrom 1998a).

A separate ERS study, “Selected Characteristics of Minority and Woman Farm Operators,” shows inequalities in land ownership and abilities to generate farm income that should alarm community planners, state officials, and, indeed, all Americans (see Table 3).

**Table 3. Selected Characteristics of Minority and Women Farm Operators**

<i>Group</i>	<i>Farms (Number)</i>	<i>Share of all U.S. Farms (percent)</i>	<i>Land per Farm (acres)</i>	<i>Sales per Farm (dollars)</i>	<i>Average Age of Operator (years)</i>	<i>Farming Reported as Major Occupation (percent)</i>
Nonwhite operators	43,487	2.3	1,270	70,659	55	48.1
Black	18,816	1.0	123	19,431	59	44.0
Native American	8,346	0.4	5,791	49,338	52	45.7
Asian or Pacific Islander	8,096	0.4	140	192,156	55	62.0
Other <sup>1</sup>	8,229	0.4	421	89,887	51	45.7
Hispanic operators <sup>2</sup>	20,956	1.1	591	115,200	53	49.7
Female operators <sup>2</sup>	145,156	7.5	309	35,281	58	50.6
All U.S. operators	1,925,300	100.0	491	84,459	53	54.7

<sup>1</sup>Primarily limited to persons native to or of ancestry from Mexico, the Caribbean, and Central and South America.

<sup>2</sup>Hispanic and female operators may be of any race.

*Source:* ERS 1992.

The Minnesota Winegrowers Cooperative recognizes that growing corn, soybeans, or wheat for commodity markets does not secure land on the edge of metropolitan areas. In reality, small acreages of land producing lower-valued commodities are at risk in most parts of the Corn Belt. Economies of scale and scope are wrong for most small-scale farmers in modern commodity markets. USDA demographic studies show clearly the problems small-scale producers have in trying to generate adequate household incomes from being basic commodity producers. The Minnesota Winegrowers Cooperative demonstrates that problems with scale, scope, and farm income can be corrected with higher-valued crops and secondary streams of income from processing profits.

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## Endnotes

1. The book explains that most co-ops were formed defensively to correct market problems ranging from market failures to market imperfections. It defines New Generation Cooperatives (NGCs) as offensive business structures in which the cooperative society's members seek to be players in markets that may be working well, but not for them. These members seek greater returns on their investment, knowledge, and labor by trying to capture more of the ultimate price of value-added products made from commodities originating on the members' farms.
2. From interviews. As will be described later, the winemaker's equipment was appraised and then turned over to the co-op as this founding member's initial investment.
3. The three sugar beet ventures that inspired NGCs in Minnesota and North Dakota are American Crystal Sugar Co., Moorhead, Minnesota; Southern Minnesota Beet Sugar Co., Renville, Minnesota; and Minn-Dak Growers Association, Wahpeton, North Dakota.
4. This information is revealed in numerous research studies made public during the past three years by the National Restaurant Association, Washington, DC, and the Food Marketing Institute, Chicago, for benefit of their associated members.
5. NGCs were given their name as a class or group of co-ops in 1994 in Egerstrom's *Make No Small Plans*. The name was selected to explain new co-ops then springing to life across Minnesota and North Dakota. Slang names then in use to describe these ventures either wrongly implied existing co-ops did not do value-added work for members, or they used terms that clashed with terms and concepts used in developmental economics. Definitions of NGCs and their differences from other cooperative structures drew heavily from the work of Dr. Michael Cook, the economist and cooperative business specialist at the University of Missouri at Columbia, and other academic researchers.
6. The author does not pretend to be an expert on wine quality. Subjective references to Northern Vineyards Winery product quality, however, are based on reactions from Californians, Europeans, and Japanese whose judgment on wine are less circumspect.

## **Hard Choices: The Birth and Death of Ranchers' Choice Cooperative**

*by David Carter*

### **Introduction**

As Clair Hull, the general manager, walked through the charred remains of the small packing plant in Colorado's San Luis Valley in June 1997, the rubble seemed to symbolize the hopes and dreams of more than 100 limited resource ranchers. Only seven months earlier, rabbis and ranchers had joined to celebrate the grand opening of a new certified kosher beef processing co-op located in the heart of a hardscrabble valley dominated by small, Hispanic-owned ranches. Now, the last glimmer of hope for the survival of the struggling project had gone up in the smoke of an electrical fire that destroyed much of the co-op packing plant.

Ranchers' Choice Cooperative was born out of the dreams and hard work of a small band of the valley's ranchers. It rode a crest of optimism and enthusiasm over a two-year period before crashing into the harsh economic realities of an undercapitalized business with inexperienced management attempting to compete in a complex marketplace.

### **New Hope for a Depressed Region**

The seeds for the Ranchers' Choice Cooperative were sewn in February 1994 when Rocky Mountain Farmers Union (RMFU) conducted a community forum among a small group of agricultural producers in the San Luis Valley. Persistent low commodity prices and the steady erosion of competitive cattle markets frustrated ranchers across Colorado; however, the southern San Luis Valley producers who attended the February meeting were particularly vulnerable to the vagaries of the livestock marketplace.

Conejos and Costilla Counties in the southern San Luis Valley are among the poorest regions in the western United States. In 1992, per capita incomes in Conejos and Costilla Counties were \$13,070 and \$10,043 respectively, compared to \$22,293 statewide (U.S. Department of Commerce 1999).

More than 77 percent of the 637 ranches and farms in Conejos and Costilla Counties marketed less than \$50,000 in products in 1992. The average per-farm net cash returns were \$10,419 in the two counties in 1992, compared to a statewide average of \$18,994 per farm (U.S. Census of Agriculture 1992).

Making a living was difficult in the southern San Luis Valley even during the best of times, despite the fact that families of many ranchers at the meeting could trace their ancestry in the region back nearly 300 years. Descendants of Spanish settlers in the 1600s dominate many communities in the San Luis Valley. Residents of other communities descended from a band of Mormon missionaries sent to the valley by Brigham Young in the mid-1800s. The valley's geographic isolation, and its distance from major markets in Denver and Santa Fe severely

hamper the economics of agriculture, but the ranchers at the meeting also noted that the valley's unique climate and culture offer potential marketing opportunities.

Located on the border of Colorado and New Mexico, the San Luis Valley is a unique agricultural region larger than the state of Massachusetts. The 7,000-foot valley floor is rimmed by 14,000-foot mountains, creating a basin that traps sub-zero temperatures throughout much of the winter. The valley receives an average of nine inches of precipitation annually and is considered the nation's leading solar basin, in which the sun shines an average of 340 days per year.

A series of underground cross faults divide the basin into a northern and southern sections. The cross faulting in the northern basin created a closed basin aquifer which is recharged annually from the snow melt in the surrounding Sangre de Cristo and San Juan Mountains (Emery 1979). Artesian water from the closed basin produces a cornucopia of barley, potatoes, spinach, alfalfa, and other crops. South of the major fault lines, neat circles of pivot-irrigated fields give way to the rocky pastures and small alfalfa fields of Conejos and Costilla Counties.

### **Organic Opportunities**

The high altitude, arid climate, and frigid winter temperatures limit the insect and weed populations. This has fostered the growth of organic production throughout the valley (Carter 1994, 1).

Cultural and economic factors contributed to a history of de facto organic production in many parts of the valley. Many of the Hispanic livestock producers in Conejos and Costilla Counties are descendants of families who first settled in the valley. These producers adhere to traditional practices of the Hispanic and pastoral cultures (Varela 1995). Many ranchers have shunned growth hormones and low-level antibiotics simply because they cannot afford the inputs.

Olive and Demetrio Valdez, two ranchers at the meeting, enthusiastically grasped the idea of creating a program to process and market high-quality organic beef. Olive and other ranchers at the meeting immediately decided to investigate the potential for developing such a marketing program. At a follow-up RMFU meeting, Olive, Demetrio and five other producers agreed to serve as a steering committee for the project.

Their initial investigation continued for nearly a year. Although the demand for organic products was increasing, beef producers were hampered by a lack of logical, consistent certification standards. No federal standards had been developed for beef, and regional organic certification groups lacked consensus on the requirements for certified beef products.

### **Kosher Processing Considered**

Meanwhile, RMFU hosted the Israeli Minister of Agriculture on an agricultural tour in the region. As part of that tour, RMFU arranged for a bison to be kosher slaughtered and delivered to Israel as a goodwill gesture. Clair Hull, then working as a field representative for RMFU, joked with the San Luis Valley producers afterward that perhaps they should develop a kosher-

processing project. The Valdezes responded that the idea of kosher processing wasn't so ludicrous. Perhaps, just perhaps, the steering committee should investigate this aspect of meat processing.

Hull began to explore kosher certification for the steering committee. Star K Kosher Certification Agency near Baltimore, Maryland, agreed to send a rabbi to demonstrate ritual slaughter, but only if the steering committee agreed to organize a community meeting in conjunction with the demonstration. On March 17, 1996, Rabbi Meyer Kurchfeld of Star K Certification brought kosher processing to the San Luis Valley.

It was a unique scene: An orthodox Rabbi standing beneath the Bingo board in the Knights of Columbus Hall in LaJara, Colorado, as more than 60 Catholic, Mormon, and Protestant ranchers listened intently to the philosophy of ritual slaughter. Ranchers emerged from that session enthusiastic about the prospects of building a co-op business relationship with the Jewish community. After all, many aspects of kosher slaughter mirrored the process that small-scale Hispanic ranchers had historically used to process beef and lamb. Later, some of the ranchers discovered that the similarities were attributable in part to the fact that some early Spanish settlers in the San Luis Valley were Jewish families fleeing from the Inquisition.

The owner of the small processing facility, in the nearby community of Sanford, where the demonstration was conducted, indicated a willingness to sell his processing plant to a cooperative of ranchers. The ranchers were immediately interested because the small plant was the only U.S. Department of Agriculture (USDA) inspected facility still operating in the valley.

### **Scarce Funding**

Funding to examine the feasibility of such a project, however, was scarce. RMFU's Cooperative Development Center allocated \$25,000 of in-kind resources toward the project, mainly in the form of Hull's time and travel expenses. The Cooperative Development Center successfully secured a \$5,000 grant from Willie Nelson's FarmAid and a \$12,000 grant from the Colorado Department of Agriculture. The FarmAid grant was restricted to directly assist producer involvement in the project, and the Department of Agriculture funds were dedicated to assessing the project's feasibility. A special account was established within the Cooperative Development Center to administer the funds (Ranchers' Choice Cooperative Offering Presentation 1996).

The Cooperative Development Center also helped the steering committee develop a membership subscription agreement through which producers would pay a one-time membership fee of \$125. Producers were also allowed to meet the membership requirement through the value of donated steers and lambs to be utilized in a series of test-slaughters (Ranchers' Choice Uniform Membership and Marketing Agreement 1996).

Members of the steering committee, assisted by Hull, actively began to recruit members from throughout the valley to participate in the project. The steering committee was meeting at least every other week to review the status and progress of the project and some dissension began to set in. The Valdezes specialized in raising Blonde Aquitaine cattle, a breed noted for extremely

low-fat and low-cholesterol beef. They felt the co-op should specialize in marketing this type of beef. Other steering committee members felt that the project should not specialize in processing any particular breed. The committee also was split over the concept of expanding the project to include producers outside of the valley. While some members felt it was important to establish the co-op to serve only producers in the valley, others felt that an expanded membership territory would allow the co-op to secure access to a more reliable flow of cattle. Though the co-op eventually expanded to include members in western Colorado and northern New Mexico, the divisive undercurrents continued to haunt the steering committee.

### Feasibility Study Initiated

The committee did agree, however, to hire Dr. Connie Faulk, a meat-marketing specialist from New Mexico State University, to conduct a feasibility analysis. Dr. Faulk agreed to develop the analysis for \$5,385. In developing her analysis, she relied heavily upon information and assumptions supplied by Hull and members of the steering committee. Her analysis indicated that a feasible project for certified kosher and natural meats would require approximately \$1.2 million in capitalization. That analysis assumed that the producers could purchase the Sanford processing plant and property for \$84,734 and would invest an additional \$159,620 in upgrades. Another \$302,328 was estimated to be required for new equipment, including a kill box designed for kosher slaughter. The remaining funds would be utilized for start-up business operations. Rabbi expenses were estimated at \$121,225 per year. That estimation assumed that the Rabbis would commute weekly from Denver.

Dr. Faulk developed the assumptions by comparing the results of two test slaughters at the Sanford plant with the production records of commercial kosher processing plants in the northeast United States. Two kosher slaughter plants studied in the Baltimore area reported that an average of 35-45 percent of the animals processed pass the kosher certification requirements. The test-slaughters conducted at the Sanford plant indicated that up to 70 percent of the animals raised in the valley might surpass that average; even so, Dr. Faulk conservatively estimated that 40 percent of the animals would meet the kosher standards. Assuming that the front quarters of a cow account for 52 percent of the meat, the study had projected that 21 percent of all beef could be sold as kosher.

**Table 1. Product Mix for Cooperative**

<i>Measure</i>	<i>Beef</i>	<i>Lamb</i>
Live Weight (pounds)	850	90
Dressing Percentage	55	50
Carcass Weight (pounds)	467.5	45
Annual Number of Head	5,000	5,000
Percentage Passing Kosher (front quarters)	40	80

*Source:* Faulk 1996.

She based the feasibility analysis on lightweight beef animals because of the absence of feedlot capacity in the valley. The co-op steering committee had intended to focus upon marketing natural grass-fed beef.

She also utilized information provided by Hull regarding indications of interest from potential kosher markets on the East and West coasts in her final feasibility report. The study assumed that 50 percent of the kosher meats would be marketed in the Los Angeles region. The Santa Fe and Denver markets were assumed to account for another 20 percent. The remaining kosher products were targeted toward outlets in Seattle, Dallas, and Atlanta. The nonkosher natural meats were targeted for markets in the Denver and Santa Fe regions (Faulk 1996).

### Promising Trends

Consumer trends in the kosher marketplace seemed promising at first glance. Faulk reported that, although an estimated 21,000 kosher food products are available in the marketplace, less than one-third of that market is influenced by traditional Jewish consumers in the 1990s. Muslims and Seventh-Day Adventists, along with nonreligious consumers concerned about food health and safety, have contributed to the growth in demand for kosher products (Regenstein and Regenstein 1992).

The \$2 billion kosher food market grew 2 percent in 1994 alone (Levine 1995), but information was scarce concerning the role that meat products played in the overall demand for kosher food. The steering committee requested funding from both the National Beef Promotion Board and the Colorado Beef Board in 1995 to conduct research into demand trends for kosher meat (Carter 1995). The funding requests were denied on the basis that the exploration of kosher consumption trends as a focus was deemed to be too narrow to warrant support from the beef check-off programs.

Kosher processing, per se, complicated the marketing analysis. Organizers of the Ranchers' Choice Cooperative had determined that the co-op would process its meat products in accordance with Glatt rules that are very stringent for every step of the slaughter and processing procedure. The committee's decision was grounded upon Star K's recommendation.

All animals intended for Glatt certification must be ritually slaughtered by a trained shocet. Any lesion, rip, broken bone, illness, puncture, or defect usually renders the animal *treiff* (nonkosher). Although some defects may be visible while the animal is alive, others require visual examination of internal organs to be sure that they are free of any defects and diseases that could render the animal nonkosher.

*Glatt* means smooth and refers to the lungs of the animal during inspection. The inspectors, or *bodeks*, examine certain organs of each animal, especially the lungs, for adhesions or other defects. The meat can still qualify as Glatt if the defects are removable, there are no more than two defects, and the lung is still inflatable. Otherwise, the meat is rendered *treiff* (Regenstein and Regenstein, 1988). Only front quarters of the animal qualify as kosher in the United States. Meat below the twelfth rib is not considered kosher, and all blood vessels visible in the front quarters must be removed (Regenstein and Regenstein 1979).

Kosher meat must be soaked and salted within 72 hours of slaughter. Kosher meat must be hosed down if it is not frozen or not koshered within 72 hours. The high moisture level is intended to prevent any blood from drying. The final step of koshering includes soaking the meat for half an hour then covering it with course salt for an hour. The meat is then rinsed well with cold water to remove the blood (Regenstein and Regenstein 1979).

### **Dissension Increases**

Dissension began to intensify among some members of the steering committee as the project moved toward an equity drive. Olive Valdez, whose vision and determination initially sparked the project, chaffed as new producers brought ideas and opinions to the project. In addition, Hull had long since ceased to act as an impartial advisor and was devoting most of his time to the project when some members of the steering committee approached him about assuming the formal role of manager of the envisioned co-op.

The steering committee agreed that the results of the feasibility analysis indicated an opportunity to develop a successful cooperative. With the assistance of RMFU's legal counsel, Chuck Holum, a prospectus and marketing agreement were developed for the cooperative. In March 1996, the steering committee formally chartered Ranchers' Choice Cooperative as a Subchapter T co-op and organized themselves formally as the initial board of directors.

The board utilized the feasibility study projection of \$1.2 million in capitalization, with half to be raised as equity from among ranchers. In April 1996, the new board of directors launched a campaign to sell the 1,500 shares of stock necessary to generate the \$600,000 in producer equity to launch the project. The stock was priced at \$400 per share, with a minimum of five shares required per investor. Every producer investing in the plant also signed an enforceable marketing agreement with the co-op. That agreement committed the producer to deliver 5 cattle, 15 sheep, or 3 bison to the co-op for each share of stock owned. The marketing agreement specified that producers would receive \$.15 per pound premium on any animals qualifying as kosher, and a \$.05 per pound premium on animals satisfying natural standards (Ranchers' Choice Uniform Membership and Marketing Agreement 1996).

### **Equity Drive Lags**

The enthusiasm producers expressed toward the co-op did not translate into capital investment. Soon, the equity drive stumbled because many producers simply could not afford the minimum investment.

The steering committee approached several lenders about developing a program to finance producers' investments in the co-op, but the lenders shied away from the concept. By the end of June, less than \$200,000 had been secured from producers.

Project organizers had already limited their opportunity to an exit strategy by that time. The owner of the meat processing facility had threatened to find another buyer for his plant if the co-op did not act soon. Feeling pressured, the co-op signed a binding contract to purchase the

plant by mid-August. In addition, Hull had terminated his employment with RMFU in order to accept the position of general manager of the Ranchers' Choice Cooperative in early summer.

Positive media coverage fed the euphoria of project leaders, even as financial commitment from producers failed to keep pace. CoBank agreed to provide the co-op with a financing package totaling \$400,000. With that financing in place, the co-op moved to close its purchase of the Sanford meat plant.

Still, the equity drive was floundering. The deadline, which was originally set for June 30, was extended to July 31, and then to August 31. By the time project organizers finally closed the equity drive in October, only \$320,000 had been generated from ranchers. Combined with borrowed funds from CoBank, the co-op launched operations with roughly half of the originally projected capital.

Problems plagued the business from the start. The actual slaughtering was delayed for more than a month because of problems in remodeling the processing facility to handle the requirements of kosher certification. Expenses, however, started to pile up from day one. Still, optimism prevailed on November 14, 1996, as three rabbis joined about 100 local ranchers to preside over a grand opening and ribbon cutting ceremony at the Ranchers' Choice Cooperative meat processing facility.

### **Start-Up Woes**

The facility's aged equipment suffered frequent breakdowns as the new owners began to accelerate the pace of processing. Construction of a new carcass cooling room fell behind schedule and was overbudget. Because of the geographic and cultural isolation of the valley, rabbis working for Star K were unwilling to relocate from the East Coast until the plant had developed a proven track record. This saddled the co-op with high travel and lodging expenses to accommodate the kosher processing.

Hull's inexperience in the meat processing business created a steep learning curve during the start-up phase. Also, several markets that had indicated a willingness to carry the co-op's products failed to materialize as anticipated.

Less than two months after the grand opening, dissension among board members about the plant's management was growing. Clear data about profitability was not available, meat yields were questioned, and construction of the new coolers lagged behind schedule. The co-op ended 1996 with a net loss of \$225,409 (*Ranchers' Choice 1996 Annual Report* 1997).

By January 1997, several board members wanted to dismiss the manager. Other board members advised a more patient approach. CoBank, meanwhile, signaled that a change in management might jeopardize the status of the co-op's loan package (Faulk 1998).

The co-op rapidly chewed through its working capital. By early 1997, the co-op was already delinquent in paying ranchers for livestock delivered to the facility. The economic stress confronting the co-op compounded the dissension inside the boardroom. Several board members began to question Hull's ability to manage the co-op and started to look for a new manager. By

early February, disagreement over management came to a head. The board members wishing to oust the manager lost the vote and resigned.

### **Kosher Economics**

The economics of kosher processing turned against the co-op as well. The summer of 1996 had been extremely dry in the San Luis Valley. Large numbers of animals suffered lung problems because of the dust and drought. By early April 1997, only 19 percent of the meat produced by the Ranchers' Choice Cooperative qualified as kosher (Faulk 1998).

The kosher markets gradually developed but were often slow in paying for products. The Ranchers' Choice Cooperative had developed a strong relationship with a small chain of natural food stores, which provided a profitable outlet for some of their natural meats. Two large grocery chains were also stocking a limited selection of Ranchers' Choice Cooperative natural meats but paid the cooperative no premium for the product over their conventional suppliers. These markets all sought the "primal" cuts of quality steaks. Demand for roasts and hamburger meat was much slower. Consequently, the co-op began to stockpile a backlog of muscle meats and hamburger in a cold storage facility. This added yet another expense to the co-op's growing pile of debts.

Acting upon the advice of the lender, the co-op began delaying payment for livestock to 45 days from delivery. An angry room of ranchers thus gathered for the co-op's annual meeting on April 4, 1997. Hull and Board Chairman Lawrence Gallegos reviewed the co-op's difficulties with the members. Hull also discussed the co-op's marketing efforts. Though no audit was available for review by the members, the co-op's accountant discussed some of the financial details of the business operation.

Board leaders asked members to have patience and to support the cooperative during this difficult period. The RMFU Cooperative Development Center stepped forward with a \$5,000 contribution to assist Ranchers' Choice Cooperative in developing marketing materials for its products. Ranchers voiced a willingness to pledge additional funds to help Ranchers' Choice. By the time the meeting adjourned, the co-op had received roughly \$90,000 in pledges.

### **The Last Gasp**

The renewed spark quickly fizzled. The excitement emerging from the annual meeting prompted the co-op to increase its processing pace, but markets for the product failed to materialize. Less than \$9,000 of the money pledged by members at the annual meeting was ultimately received by the co-op.

By early May, CoBank and the local lenders began talking about pulling the plug on the co-op. The IRS was contacting Ranchers' Choice Cooperative about nonpayment of employee payroll taxes, and, the USDA was questioning management about the failure to pay ranchers for animals delivered to the plant. As the financial pressures mounted, Hull was forced to take time away from his marketing efforts to stave off creditors. The co-op's collapse seemed inevitable.

The Colorado Department of Agriculture and the USDA's Packers and Stockyards Administration intervened to assure payment to producers for the animals they had delivered. The agencies informed Ranchers' Choice Cooperative that \$27,000 must be paid to producers by June 30, with an additional \$200,000 owed to producers to be paid shortly thereafter. Accounts payable to suppliers had mounted to \$150,000, and \$17,000 was owed to the Internal Revenue Service for delinquent payroll taxes.

The end came on May 27, when an electrical short in the plant's ancient wiring system started a fire in the ceiling above the processing floor. Though the fire started while a full crew was working on the kill floor, the flames quickly grew out of control. Before the local fire department could extinguish the blaze, the fire had destroyed the kill floor and damaged much of the processing area.

The Ranchers' Choice Cooperative was out of business.

The board talked initially about utilizing insurance proceeds to rebuild the plant and restart the operation. Many member ranchers wanted the co-op to use the proceeds to pay them for the livestock previously delivered to the plant, but the lenders had first call on that money.

Hull worked briefly to try and reorganize the co-op but soon left to accept a position as marketing director for the Denver Buffalo Company. Gallegos and a handful of remaining board members continued to sort through the problems of the future for Ranchers' Choice Cooperative. They still believed that a small specialty meat co-op could operate profitably in the San Luis Valley.

### **Reorganization Attempts**

RMFU intervened once again in late 1997 to assist the board in negotiating a write-down agreement with CoBank. RMFU agreed to guarantee an arrangement in which the Ranchers' Choice Cooperative board would secure funds to pay off the loan at the write-down value. The board's inability to generate the needed capital by the required deadline ultimately transferred ownership of the facility to RMFU. An investor group sanctioned by the co-op board formally purchased the plant in February 1999. Reconstruction of the facility is now underway. A small core of ranchers continues to pursue the dream of restarting the co-op. Three former members have filed liens against the remaining assets. Most of the members, though, have abandoned the idea of kosher processing and have surrendered any hope of receiving the money they are owed for the animals they delivered to the co-op.

The new owners are exploring opportunities for small-scale processing and marketing of certified organic meat. New feasibility work is underway.

The dream of Ranchers' Choice Cooperative, as a promise for the future for more than 100 limited resource San Luis Valley growers, has largely faded into the lore of the San Luis Valley.

## **Conclusions and Summary**

The brief history of Ranchers' Choice Cooperative illustrates the dangers of substituting enthusiasm for experience in co-op development. The project was plagued at the outset by the clash of individual agendas among members of the steering committee. One leader in the project wanted to promote the marketing of a specific breed of cattle. Other members of the committee wanted to include all breeds but desired to limit participation to the limited resource producers in the southern San Luis Valley. Still other members advocated expanding the field of membership to include larger producers and ranchers in other regions.

As in many limited resource communities, the initial civility among steering committee members masked an inability to constructively resolve conflict. Thus, differences simmered until they boiled over at a critical juncture of the co-op.

Marketing projections for the co-op proved to be extremely over optimistic. During the exploratory phase, several marketing outlets in Los Angeles had expressed an interest in considering stocking kosher meat from Colorado. Few of those markets actually stocked product when the co-op began operation.

Undercapitalization and inexperienced management were critical weak links in the cooperative. Organizers launched the equity drive with the goal of securing the \$600,000 in producer investment as was recommended in the feasibility analysis. As efforts fell short of that goal, the project organizers scaled back their goal to meet actual performance. In committing early on to purchase the Sanford facility and to hire Hull as manager, the co-op organizers had eliminated their capacity to develop an exit strategy. As the equity drive failed to generate the needed capital, the co-op board felt compelled to continue moving forward.

The lack of experienced management hampered the new business's ability to analyze critical production data and to recommend effective mid-course corrections. The lack of reliable financial records also kept the co-op board "in the dark" about critical yield data, cost of sales, rabbi expenses, and other information; and the lack of operating capital hampered the co-op's ability to weather the inevitable unforeseen obstacles that arise in the start-up of a new enterprise.

The Ranchers' Choice Cooperative experience provided important information regarding the challenges of New Generation Cooperative development in limited resource communities. Additional efforts invested in upfront analysis may spare organizers the pain of failing to meet overly optimistic assumptions. Market analysis must be sophisticated and thorough in order to avoid the "build it and they will come" syndrome.

Ultimately, start-up projects in limited resource communities have little margin for error. Additional months invested in the analysis of a project may pay important dividends in the ultimate survival and success of a business.

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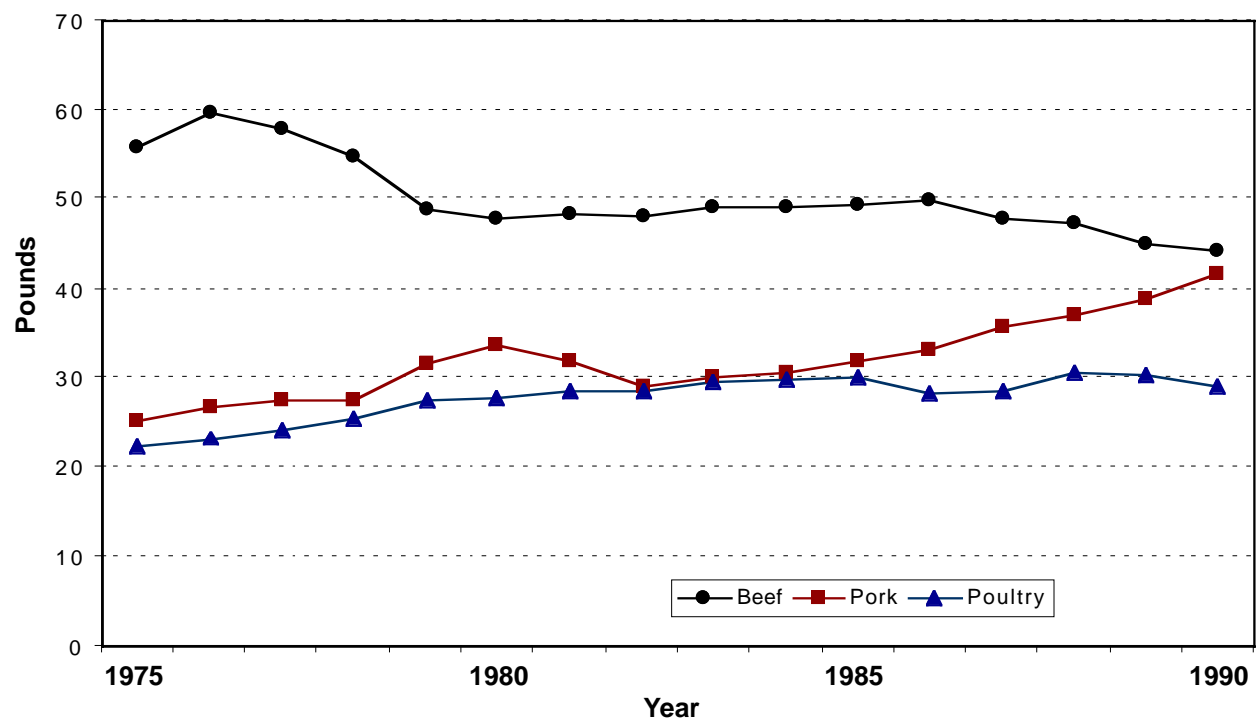
## U.S. Premium Beef

*by Mary Holz-Clause*

### Background

The U.S. beef industry has spent the past 20 years realizing a constant and substantial loss of market share to other animal protein sources, especially poultry (see **Figure 1**). A lack of coordination has led to a roiling loss of direction in the industry. Information does not flow freely up and down the production chain. Change has been limited and has not been responsive to consumer markets. Price actions within the production chain are predatory, resulting in consolidation at all levels. Until recently, new product development was not a priority, and those products that emerged were niche products and not significant enough to affect market share trends.

**Figure 1. Beef, Pork, and Poultry Per Capita Consumption**



Source: U.S. Department of Agriculture 1997.

In the beef industry, three companies control 80 percent of the packing capacity. To date, these companies have been commodity/volume driven, merchandising meat and non-edible byproducts throughout the world. Branded labels have been a very rare product in this environment. Volatility of price and margins at all levels has led to consolidation and distrust

along the production chain. Other competing industries, such as poultry, have integrated functions to enhance information flow and responsiveness to consumer markets. They have used the information to improve system efficiency at all levels, allowing cost to drop and volume to increase while maintaining margin.

The beef industry is harder to integrate because of its huge land and capital needs and because of the types of individuals that dominate it. Nearly one million beef producers breed 80 different kinds of cattle and send them to several hundred feedlots. The only thing ranchers and feeders have in common is a distrust for the packers, who often pay the same price for superior cattle as they do for the lower-quality kind (Conlin 1999, 76).

Many producers have reached a level of frustration, however, that makes them amenable to change. The industry is vast, and the products are popular. Even with the erosion of market share, beef and kindred products remain dominant in overall value for all agriculture. The industry has proven tough, emerging from two decades of health and safety scares and massive sophisticated competition to remain the largest protein industry segment.

### **How Cattle Are Sold**

Throughout the first 60 years of the century, live cattle were delivered to terminal markets such as Chicago. Large commission firms at these locations handled the selling of the cattle to a packing company. This trade was on a price per hundredweight negotiated on the day of sale.

In 1960, a start-up company called Iowa Beef Processors (IBP) revolutionized the process by moving beef packing to the areas where the cattle were finished and breaking the carcasses into smaller cuts that fit into boxes. This approach cut freight costs, reduced the overhead of stockyard space, and improved some quality factors. IBP also put buyers in cars with two-way radios, eliminating the commission person from the selling process. The industry as a whole quickly followed suit and the central stockyards eventually disappeared.

In 1999, the majority of live cattle are sold on the cash market directly to a packing company. There is no middle person in this transaction, and the ownership of the cattle moves completely from the feeding entity to the packing entity. The majority of these transactions are based on only two factors: (1) the live weight of the animal minus a calculated shrink, usually four percent (the buyer takes quality into the bid consideration to a certain degree); and (2) the negotiated price per hundredweight—for example, a 1,250 pound steer minus 4 percent shrink times the live market price per hundredweight equals the amount paid to the feeder. This is known as selling live.

The second most common method of selling is to use a negotiated price for the hot carcass weight of the animal. This selling method places with the feeder the risk of the percent of the animal that actually ends up in a usable carcass (yield) at the packing plant. That risk can usually garner an extra return to the feeder unless the animals or his or her methods fall below average expectations. This method is known as selling “in the meat.”

Another method used with a significant percentage of the total cattle marketed is the grid or formula pricing method. This method uses a grid matrix of several value factors that represents

premiums and discounts depending on how the animal dresses out in the packing plant. These factors include dressing percentage, lean meat cutability score, quality grade, fitting within the ideal weight range for the carcass, and other factors that might make the carcass fall outside desirable specifications for the packer. The grid matrix is built around a base price that is usually the “in the meat” price previously described. The actual cost of the animal is reconstructed or formulated on an individual basis according to how it performed in each of the categories.

Grid or formula pricing places the risk on the feeder. Animals will be discounted for realizing poor carcass specifications; however, the upside to this is if the cattle do perform above the average or norm. This method is an intermediate step toward value-based marketing. The ultimate extension into value-based pricing would be to take the various cuts of meat from the animals to their final sale and add those values backward to reconstruct the live value of the animal.

In a fully integrated system, the owners would have little interest in the live value of the animal because the margins to that business would be derived throughout the system and not through transactions at segmented points of sale. The beef industry has not achieved such integration, nor is it likely to happen very soon; however, the need for better system efficiency is driving change.

The lack of coordination or integration has meant information does not flow up or down the production/processing/marketing chain. Thus, market signals relative to quality factors or even supply are very poor. Furthermore, although the free market has worked efficiently over a long-term cyclical pattern, it has created the undue volatility and dislocation in the short run that arguably has led to consolidation. Remarkably, consolidation has not automatically led to better coordination of supply or quality. The lack of information or coordination has meant the supply chain is not responsive to end markets; therefore, a long-term loss of market share has occurred.

Significant numbers of cattle producers are trying to improve the long-term outlook for their industry. They almost universally understand that certain changes to marketing resulting in greater profitability will also result in a positive change to the industry’s competitiveness. It was in this context that U.S. Premium Beef was born.

## **Beginnings**

U.S. Premium Beef (USPB) is deeply rooted in the cow-calf segment of the beef industry. USPB founders believed that working together and sharing information in a coordinated system could help them compete against others in the meat industry. “We could see that our industry needed to change in order to survive,” said Steve Hunt, one of the four Kansas cattlemen who started USPB and who is now the company’s chief executive officer. “We had focused so much energy on competing with each other, we had taken our eye off of the ball” (Gilmore 1999, 22).

Teaming with Hunt, a fourth-generation cattleman from Arkansas City with work experience in commercial banking and finance, were Terry Nelson, a commercial cow-calf producer, backgrounder, and cattle feeder from Long Island; Doug Laue, a custom backgrounder and cattle feeder from Council Grove; and Terry Ryan, a commercial cattle feeder from Scott City.

The group had collectively and individually tried to determine how to get more value from their animals. They first met in November 1995 to discuss the concept of forming a business. The group studied business structures and several successful agricultural co-ops, including Sunkist Oranges and Blue Diamond Almonds.

As the group continued its study, they decided if producers were to be committed to consumer-oriented beef, they also had to be committed to ownership in the structure. Thus, they proposed a marketing co-op in which members would be required to capitalize the co-op up-front rather than through earnings (Smith 1998, 9).

Thus, USPB was established on July 1, 1996. The producer-owned business elected a six-member board of directors, representing all the beef industry segments. The board membership was later increased to seven members.

### **The Mission**

*To increase the quality of beef and long-term profitability of cattle producers by creating a fully integrated producer-owned beef processing system that is a global supplier of high quality value-added beef products responsive to consumer desires.*

In early September 1996, the board members held meetings with livestock associations and media organizations to explain their concept of the information-based organization, which would provide feedback to the producers so that they could make changes desired by consumers in the marketplace. Five meetings were held with producers in Kansas. The road show was also taken to California, Colorado, Iowa, Missouri, Nebraska, Oklahoma, and South Dakota.

According to Hunt (Suther 1996, 68),

As producers, we have watched ourselves selling on a commodity basis, all receiving a similar price, no matter the quality of our product. Yet we hear consumers say they are not totally satisfied with the product. It seems like the signal hasn't been transferred through the market, from consumer, to retailer, to purveyor, to processor, back to the producer, who could really make the difference.

Hunt indicated that through the co-op, members would obtain the 15-20 percent profit the processors currently get, and producers could impact quality sooner by culling cows to dispose of the outliers and sorting their better calves into the USPB program (Suther 1996, 68).

In its start-up phase, USPB faced several challenges. There was a lack of incentive to produce higher quality beef cattle. Mark Gardiner, an early participant, explained, "The economic signals have been blurred. It has been best to take a mismanaged animal that you buy cheap and upgrade him to average" (Merlo 1998, 19).

Another difficulty faced by the co-op was the problem of a "mature" market. With beef demand seemingly at its peak, fewer and fewer ranchers have entered the business. The average age of a U.S. rancher is 57 years old. According to Kelly Giles, a third generation Kansas rancher and investor in USPB,

When you cannot bring in young people, that spells the end of an industry. In Clark County, Kansas where I live, I know of only 10 producers younger than age 40. When

you're just ten years away from retirement, you're not willing to risk your neck on a new kind of investment (Merlo 1998, 21).

Despite the initial difficulties, however, within months, producers, representing more than 80,000 head of cattle, committed to financing a business plan. The business plan offered producers an opportunity by adding value through increased premiums for quality carcass characteristics. Total start-up costs were more than \$1 million, which included funding for research, legal services, and administrative and system set-up costs.

The newly formed company embarked on a membership drive. Members could join with a lifetime membership fee of \$500 plus a registration fee of \$.50 per head of cattle that would be delivered to USPB. (The registration fee later was raised to \$2 per head.)

### **Purchasing a Beef Plant**

At the same time, USPB began to explore ways to enter the beef-processing segment. The board decided that control of a harvesting facility was necessary to complete this objective. The group analyzed a number of options, including building a new facility and custom-slaughtering cattle. In the end, they voted to partner with a successful existing company, Farmland National Beef (FNB), a subsidiary of Farmland Industries.

On July 31, 1997, USPB signed a letter of intent to purchase up to 50 percent of FNB. To make its purchase, USPB launched a stock offering at \$55 per share and \$38 million was raised. That offering closed in late November. On December 1, 1997, USPB became a part owner of FNB. The co-op initially bought about 25 percent of the stock. USPB matched the amount of stock raised with a loan from the Bank for Cooperatives (CoBank), located in Wichita, Kansas. In December 1997, USPB launched another stock offering, which closed a month later. With the new stock, USPB bought more shares of FNB, but will not disclose its total percentage of ownership.

FNB operates two plants in Dodge City and Liberal, Kansas. It is the fourth largest beef packer in the U.S. and processes 9 percent of all fed cattle in the country. The company markets boxed beef, Prime, and Certified Angus Beef domestically and internationally. In addition, FNB markets further-processed and value-added products, primarily portion-controlled steaks, to restaurants, mail order catalogs, and foodservice and retail customers through the Kansas City Steak Company, which it acquired in late 1997. FNB markets products under four branded labels: (1) Certified Angus Beef, (2) Farmland Black Angus Beef, (3) Farmland Certified Premium Beef, and (4) Kansas City Steak Company.

The key to USPB was the purchase of a processing facility, with associated branded products. Without a brand recognizable to consumers, the beef business doesn't have much going for it. In a good year, IBP, the biggest meatpacker, ekes out a 1.7 percent pretax margin. FNB's results last year were \$43 million pretax net on sales of \$2.2 billion; however, its sales of branded beef, at \$100 million and growing 30 percent a year, exceed those of the three largest packers combined. The profit margins on Black Angus Beef are 20 percent higher than on no-name beef, FNB's CEO, John Miller said in a recent *Forbes* article (Conlin 1999, 76).

Like the poultry giant Tyson Foods, with its merchandising army, FNB tracks the beef all the way to grocery store shelves. Distribution is helped by the fact that FNB already has a national branded presence in pork. The FNB beef brands are displayed in their own refrigerated display cases to distinguish them from commodity meat. The branded beef products are now in 800 plus stores, including chains such as Jewel in Chicago, Lucky in California, and Acme Markets on the East Coast (Conlin 1999, 76). In addition to the domestic market, FNB has an aggressive sales force in Japan and Korea and had restructured its Mexico operations in 1998 to take advantage of expected market growth there.

USPB CEO Hunt (1999) indicated that “through Farmland National Beef (FNB), our system for the first time on a large scale, gave producers an opportunity to realize profit from the value gained through further processing beef all the way to consumers.” According to Hunt in an interview for the *Angus Journal*, “By partnering with Farmland Industries in the ownership of FNB, USPB producers gained market access to the consumer through Farmland’s name recognition and already successful labels. As a result, highly desirable products could be sold through branded beef labels” (Gilmore 1999, 23).

John Miller took over as FNB’s CEO in 1992, after buying slaughterhouses and retrofitting them with state-of-the-art equipment. To capitalize the business, he used the cash from a family business (a meat packing business sold to ConAgra for \$33 million in cash and stock), \$25 million from Farmland Industries, and borrowed \$74 million from banks (Conlin 1999, 76). According to Steve Kay, editor of *Cattle Buyers Weekly*, “John Miller’s put together one of the most functionally integrated beef systems in the U.S. If the big three packers aren’t looking over their shoulders, they should be” (76).

### **Types and Conditions of Membership**

USPB has two types of membership: (1) lifetime and (2) associate. In addition, producers can lease shares from stockholders within the membership.

The lifetime associate membership fee for a stockholder is \$500. A one-year associate membership fee costs \$100. Individuals do not become voting members until they have purchased at least 100 shares of common stock in the co-op. Although membership common stock and delivery rights are transferable under certain conditions, membership in the co-op is not transferable. The co-op is not obligated to the member other than in its requirement to issue a membership certificate.

In addition to signing a membership application, the farmer/rancher seeking to be a stockholder signs a Uniform Delivery and Marketing Agreement and commits to deliver one head of cattle annually for each share of stock purchased. There is no refund of the membership fee, but the stock is transferable.

Two forms of delivery agreements are available:

1. An agreement for “even slots,” that is an even monthly delivery of the delivery commitment.

2. An agreement for “odd slots,” that is delivery of the delivery commitment during one or more specific monthly periods each year. For odd slots, the specific monthly delivery period(s) are to be selected by the designation and if overfilled, by an alternative selection procedure.

If a person cannot meet the delivery schedule due to weather or other factors, USBP works with the producer to deliver cattle when they will be ready for market. Although there is potential for seasonality of delivery because of the large geographic region USBP pulls from, they have been able to balance cattle deliveries to keep a consistent supply of cattle for their markets.

Associate members are not allowed to acquire shares of the common stock in the co-op or to become voting members in the co-op until they acquire at least 100 shares of membership common stock. The lifetime associate membership fee is \$500. The one-year associate membership is \$100. The lifetime associate membership fee is nonrefundable.

The co-op has the right to terminate membership if the member (1) fails to deliver cattle; (2) dies; (3) takes actions that will impede the co-op from accomplishing its purposes; or (4) takes or threatens actions that adversely affect the interests of the Co-op or its members (By-Laws 1997).

Although USBP’s stock offering was legally closed on January 23, 1998, there are several other ways in which interested producers can still participate in the company. Persons occasionally have shares they are willing to lease to other producers. Likewise, normal business attrition usually generates a limited amount of stock for sale from individual members. The company will help potential customers locate members with shares for lease or purchase.

### **Getting Started**

On December 1, 1997, USBP started processing cattle. Its more than 690 members from 24 states delivered approximately 8,100 finished cattle each week through the end of 1998 to packing plants in Dodge City and Liberal, Kansas. Through April 1999, more than 600,000 cattle have been marketed through the USBP system. Since December 1997, premiums of more than \$9 million have been paid compared with selling on the cash market.

### **Features of U.S. Premium Beef**

USBP membership in has the following features:

- Lease or ownership of shares for members
- An opportunity to partner with feed yards or other members in retaining ownership of cattle
- No geographic restrictions on where members can do business (Members decide where the cattle will be fed. USBP cattle have been fed in more than 300 yards in 11 states.)
- Non-breed specific (except that cattle can not have a high percentage of Brahma, dairy, heiferettes, or bulls)
- Value-based grid pricing system that is very competitive

- Delivery dates determined by the owner at his or her perception of optimum endpoint
- Sharing of profits through stock dividends
- Transportation credit of up to \$.55 per hundredweight
- Forward contracting available
- Individual carcass information free of charge for producers
- Advice and consultation from USBP field staff with assistance in management, genetics, economics, and animal health
- Access to market animals through value-added programs such as Certified Angus Beef, Farmland Black Angus Beef, and Farmland Premium Beef

Producers who lease shares can sell cattle on the grid, receive individual carcass data at no charge, obtain up to a \$.55 per hundredweight transportation credit, and earn any patronage dividend paid out to USBP members based on FNB's earnings.

### **How Producers are Paid by USBP**

The program is non-breed specific; however, cattle types with heavy Mexican influence do not support the product philosophy, regardless of grading characteristics, and are not encouraged to be marketed through the program. USBP does not accept heiferettes, Holsteins, cutting bulls, or cattle with a high percentage of Brahman influence.

The base live price for the grid is the weighted average in Kansas reported by the USDA for the week previous to the week the cattle are delivered plus \$.25 per hundredweight. The base live price is converted to a hot carcass price using the previous week's plant average hot yield for non-grid cattle purchased in Kansas by FNB.

Actual performance of the cattle marketed under USBP's grid are compared to a base 52 percent for Choice or better and the rolling average performance of Kansas non-grid cattle at FNB during the preceding four weeks for Yield Grade premium/discount calculations. Prime, Certified Angus, Hardbone, Ungraded (Standard, Dark Cutter), and carcass weight premiums/discounts are calculated with no comparison to plant averages. The Choice premium/discount is calculated based on a four-week rolling average of USDA Heavyweights Choice/Select cutout spread. Yield Grade 1 and 2 receive a premium for being above plant average but are not discounted if below the plant average. Yield Grade 4 and 5 receive a premium for being below plant average and are discounted for greater than plant average (see **Appendices A and B**).

### **Unit Retain Fee**

A unit retain fee is used in a closed marketing cooperative (such as USBP) to build a reserve fund, and \$12 per head is deducted from the cattle proceeds to fund the reserve account. USBP had the choice of either deducting a unit retain fee, or increasing the purchase price of its stock to create a capital reserve fund. This unit retain fee is repaid one year from the date the cattle are

processed. The repayment of this fee is contingent on FNB's future success. The \$12 is repaid on the one-year anniversary of the processing date calculated at \$12 plus one percent over the January 1 Prime Interest Rate.

## The First Year

### Financial

"This first year of operation has been a year filled with challenges and opportunities for our members, as well as U.S. Premium Beef and our processing company, Farmland National Beef," said CEO Hunt (1998). The organization delivered about 8,100 head per week during the first year of operations; however, Hunt notes, the organization incurred additional expense, which was mostly due to start-up. Also, the organization had a 14-month year because it changed the year-end to coincide with FNB's fiscal year. USBP's fiscal year was changed from June 30 to August 29. The bottom line is that FNB showed a net income of \$31 million. USBP's share was \$7.5 million. Expenses and operations for USBP were about \$3.8 million. Thus, USBP had a net income of \$4.1 million and a taxable income close to \$3.3 million. Taxable income for fiscal year 1998 was \$10.14 per head. The cash patronage return per head was \$4.06, with a balance of \$6.08 being withheld in the member's name in USBP.

**Table 1. USBP Return on Investment**

	<i>Average</i>	<i>Top 25 Percent of USBP Producers</i>
USBP Investment	\$55.00	\$55.00
USBP Income/Head	\$10.14	\$10.14
Average Return/Head Over Grid	\$7.47	\$26.03
Average Return on Investment	32.02 percent	65.76 percent

*Source:* Hunt 1998.

## Farmland National Beef

Although this case study features USBP, the analysis would not be completed without discussion of Farmland National Beef (FNB). Fiscal year 1998 may well be remembered as a year of contrasts for FNB. "There were 1.6 percent fewer cattle, but beef tonnage was up 2.2 percent," according to FNB's Executive Vice-President, Tim Klein (Miller 1998, 2). "Yet, we [the industry] had about the same amount of processing capacity to buy those fewer cattle and we had more pounds in the marketplace, which put pressure on our cutout values. That combination tends to put a lot of pressure on operating profits, which it did last year." Industry packer margins were about \$18 per head lower in 1998 than in 1995. That coupled with the collapse in the drop credit area, caused specifically by the Korean financial crisis, made hides drop about \$30 per hide in two weeks.

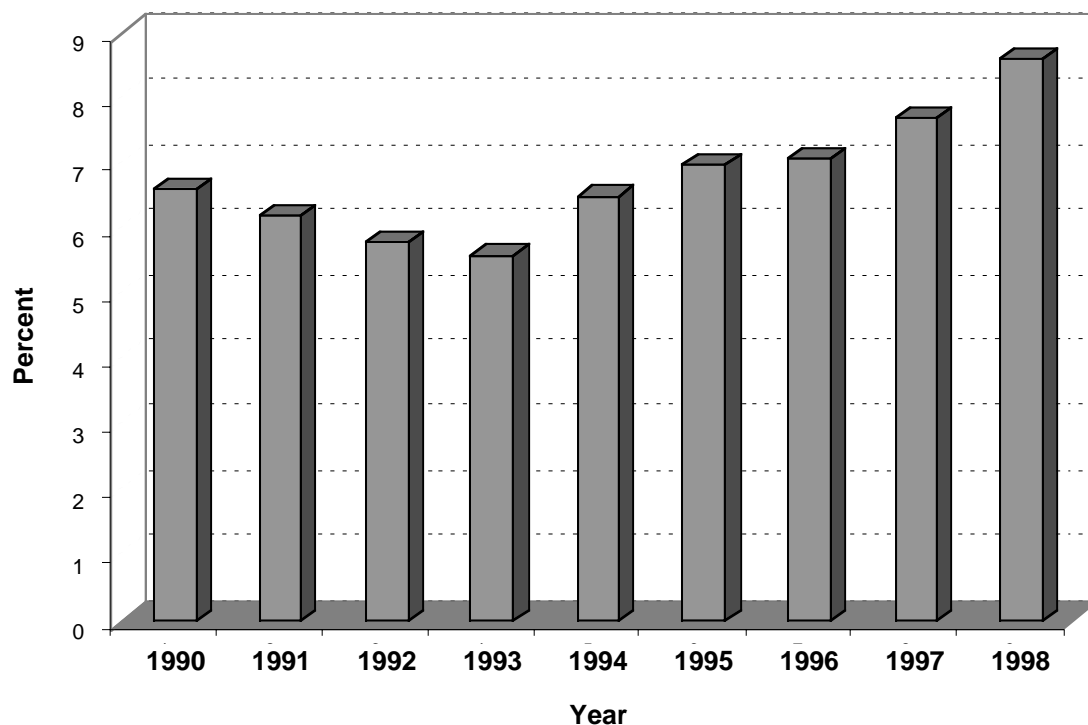
According to FNB CEO John Miller (1998, 2)

We came into this year knowing we were going to have fewer cattle to choose from and margins would drop from the previous year, but we had a good plan. We knew we

could offset some of that by lowering operating costs and by increasing gross margins by harvesting more cattle. The bottom line is that we didn't have a good year in 1998, but we had a better year than much of our competition and we made more than \$31 million (\$43 million pretax).

As Miller (1998) noted, although FNB did not have a stellar year, it excelled relative to the rest of the industry. The company experienced its largest one-year increase in market share in 1998 from 7.7 percent to 8.6 percent (see **Figure 2**). "What is significant is that from 1997 to 1998, the industry processed 1.6 percent fewer cattle and our market share actually went up," Klein explained.

**Figure 2. FNB Slaughter Market Share**



*Source:* Hunt 1998.

In fact, during the past five years, the industry harvested 5.8 percent more cattle than in 1993, but during the same time, FNB grew 59 percent. Klein noted, "... so we grew our slaughter volume at ten times the rate of the industry's growth. During the last year, we took about 37 percent of the increase in cattle supply that was available to kill and that's significant for the number four player with 8.6 percent of the market" (Miller 1998, 3).

One reason for FNB's success in terms of processing cost per head and increased market share is the significant investment the company has made in plant improvements. "Since 1992, we've spent millions of dollars to improve our plants," explained Miller (1998, 3).

In addition to increased plant efficiencies, FNB's growth in international sales, especially the Japanese market, played a large role in the company's financial success in 1998. "We export to more than 60 nations across the world," Miller (1998, 4) pointed out. "We have an office in Seoul, South Korea and this year we opened an office in Japan. We have had tremendous success in that market since doing that."

"We had about 7 percent of the chilled market in Japan in 1997, but that has climbed significantly since we opened our Tokyo office in January—to more than 12 percent in August" (Miller 1998, 4). Klein added, "Our objective in Japan is to at least double what our domestic share is so if we're at 9 percent in the U.S. market share, which is our objective for fiscal 1999, then our objective in Japan is to have at least 18 percent of that country's chilled beef market. Our Japanese customers really like U.S. Premium Beef's farm-to-table approach to producing beef," Miller (1998) pointed out. "We've taken a number of our Japanese customers on tours of USPB member operations and they really love the story. It's been a great marketing tool for us."

FNB has several line items that fit into the consumer home meal replacement market (HMR). "The idea of HMRS is just starting to catch on in the marketplace. We have precooked top rounds, roasts, and flavored ground beef items," reports Tracy Thomas (1999), director of marketing for USPB.

### **Producer Satisfaction**

One of the concerns that many producers had initially was that if they sold cattle to USPB, other packers would not purchase cattle from their feedlots. "Our feedlots were initially concerned about discrimination, but none have indicated that has been a problem," said Thomas (1999).

Thomas (1999) noted, however, that selling cattle in a quality-based meat program versus selling live on the cash market was an initially difficult area for producers. Initially producers were selling cattle at a discount. Thomas asserts, "Producers had to make changes in management practices. Once they saw that they would be compensated for doing the right things, they changed. As genetic changes play out in the coming years, I anticipate we will continue to see improvements in the premiums paid. So far, the changes have been primarily because of management."

"There has been more than one USPB member who did not believe the carcass data sent to them was from their cattle," said Thomas (1999). The next time producers marketed cattle, however, they were invited to the packinghouse to see what was under the hide. Many producers were surprised that the meat was not the quality they thought they were producing and have started to make the necessary changes.

### **Using Technology**

To assist in more efficiently and accurately providing individual carcass data and making genetic decisions, USPB is encouraging its producers to purchase and use electronic identification (EID) tags. To help foster their use, USPB is rebating 50 percent of the tag cost to

producers who use them in 1999. EID allows a producer to keep track of the animal and record animal health history, including injections and site information that can easily be recorded and transferred to the cattle owner from the feedlot. The feedlot can use this system to track average daily weight gain and then use the ultrasound data to project when animals should be marketed. The EID system is then used at the FNB packing companies to provide feeders with individual carcass data.

### **Marketing to Producers**

USPB must find producers willing to meet the quality standards and make the necessary changes to ensure that this happens. The co-op attends trade shows of the state cattlemen's associations, attends national trade shows, and runs advertisements in popular industry magazines. In addition, USPB staff members frequently speak at annual meetings of beef organizations, banquets, and fairs.

### **Staff in Place**

In its first 12-18 months of operation, the staff has grown to meet the needs of the organization. Currently, there are two offices for the organization: one located in Kansas City, Missouri, and the other in Dodge City, Kansas.

### **Lessons Learned**

In addition to sending carcass data to members within a week after slaughter, the company assists producers in analyzing results. A field representative works with members to identify problem areas. USPB has held regional meetings, and producer-education manuals have been distributed. "With information on more than 800,000 head of cattle, we now have a database that is second to none," Hunt says. "We are in a position to really help our members find out what is working and what is not" (Gilmore 1999).

One early discovery: Pens of cattle that have not suffered from heavy or lightweight carcasses or from Yield Grade (YG) 4s have consistently received premiums over the cash market. Also, a promising growth area with larger returns is the export market. In the last year, FNB opened offices in Tokyo, Japan, and Seoul, Korea, focusing on direct meat sales. Since last summer, sales in Japan have increased 50 percent. "We have had tremendous success in Japan with the U.S. Premium Beef concept," Hunt says. "The Japanese like dealing face-to-face. They like being able to trace back cattle to producers who are accountable for the meat" (Gilmore 1999).

### **Future Plans**

USPB will continually manage its expansion as market share increases. USPB started as a Kansas-based company and has expanded into 24 states. As USPB expands the marketplace from which it buys cattle, it may also be involved in increasing its processing capacity. "We will expand in whatever way makes the most economic sense," asserts Thomas (1999).

Another goal of USPB is to return producers' investments within 5-10 years through premiums and patronage dividends. "Cooperatives can take years and years to be fully capitalized. From the start, USPB was more than 50 percent capitalized. With our current structure, we should be fully capitalized within 12 years. At that point, earnings will go directly to members," said Thomas (1999).

USPB also intends to expand member communication with its members. According to Thomas (1999), "We recently completed the development of our internal home page for use with our members. In the future we anticipate that our members will have a secure password and will have access to their confidential member information on line. Additionally they will be able to compare their individual data to that of other members to see how they are doing."

In addition, USPB plans to continue its quest to develop quality products. In that definition of quality, source verification and on-farm hazard analysis critical control points (HACCP) provide consumer assurance of quality and safety. USPB intends to implement usable, effective systems as they are developed. It also intends to work closely in developing quantifiable and predictable standards for the cattle it markets. Asserts Thomas, "If you can't measure it, you can't manage it. Our initial goal was not to be the savior of the beef industry, but to make our producers as much money as we could."

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## **Conclusion**

It seems the USPB's success in moving relatively quickly from concept to reality was tied to the following five issues:

1. Through a process of rumination, the principal leadership of the USPB movement was ready for change. Many of the key players and early signatories have had industry involvement on a state or national level that exposed them to the decade-long discussions about reasons for loss of market share. They seem to have substantial seasoning in the business but also have many years ahead of them.
2. There is a mix of feeders and cow/calf or stocker operators. Other similar concepts have failed to develop due to a lack of such comprehensive backing.

3. Emphasis was placed on information with application toward quality improvement. The group seems to have a powerful dual goal of improving individual profitability by doing the things that are good for the industry as a whole.
4. The group was willing to think no small thoughts. They went for an ownership position, understanding the control that would come with it. Since the stock gives a member both the right and the obligation to deliver cattle to FNB, the commitment is solid with all parties.
5. They chose a company with premier management in Farmland National Beef. The company had already committed huge amounts of money to process and product improvement since 1992, so it was well-positioned to grow. Furthermore, FNB had good brand name presence in the domestic market, with a strong international reach in place as well. The leadership of USPB was astute in recognizing the value of the brands and the well-developed merchandizing structure of FNB.

The fact that USPB could reach a deal with Farmland was probably a matter of timing and philosophy. Farmland itself could see a benefit from freeing capital it had invested in FNB. USPB was forming under a co-op structure that offered a good fit for the companies at the outset. Farmland had long recognized its connection to beef production, particularly at the cow/calf level. Through the 1990s, it had reached out to vertically coordinate segments of the industry served by the co-op. USPB would certainly fit the Farmland philosophy for improving returns for its members. The combination of meeting Farmland's capital needs and fitting philosophically was powerful in bringing the deal to fruition.

As the fourth largest packer, FNB has certainly had to feel competitive pressures from the big three packers (Monfort, IBP, and Excel). The company has been a strong "spot market" purchaser over the years and not a big contract procurer of supply. By being tied to such a narrow region, there have certainly been times when the big three packers could make life difficult for FNB. In the interest of survival and profitability, it became apparent the company would need to reach ahead and control some supply. It must have seemed fortuitous to FNB to have a quality oriented group step forward with a willingness to supply in volume under specifications. Once again, the timing helped open a door for negotiations.

Another timing factor is the growth of grid marketing and its acceptance. With a push for information, a producer has become more likely to sell on grid to get the data needed. Commercial feedlots want to offer service value to their clients, so special systems or markets would fit well. They are also struggling to help clients achieve profits. More cow operators are seeking to retain ownership through slaughter. All these factors have converged to create critical mass and ignite the fire that became USPB.

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## Appendix A

### U.S. Premium Beef Cattle Settlement Grid

#### Cattle Type

The program is non-breed specific; however, National Beef's reputation in the marketplace was built on providing high quality beef products. Cattle types with heavy Mexican influence do not support our product philosophy, regardless of grading characteristics. USPB does not accept heiferettes, Holsteins, cutting bulls or high percentage Brahman influence cattle.

#### Base Price

The base live price for the grid will be the weighted average price in Kansas reported by the USDA for the week previous to the week the cattle are delivered plus \$.25 per cwt. The base live price is converted to a hot price using the actual weekly plant average hot yield for non-formula cattle purchased in Kansas by Farmland National Beef.

#### Premiums & Discounts

Actual performance of cattle marketed under USPB's grid will be compared to a base of 52% for Choice or better and the rolling average performance of Kansas non-formula cattle at Farmland National Beef during the preceding four weeks for Yield Grade premium/discount calculations. Prime, Certified Angus, Hardbone, Ungraded (Standard, Dark Cutter) and carcass weight premiums/discounts will be calculated with no comparison to plant averages. The Choice premium/discount will be calculated based on a four week rolling average of USDA Heavyweight Choice/Select cutout spread. Yield Grade 1 and 2 will receive a premium for being above plant average, but will not be discounted if below plant average. Yield Grade 4 and 5 will receive a premium for being below plant average and discounted for greater than plant average.

<u>Category</u>	<u>Premium/Discount</u>
Prime	+ \$9.00/cwt
Certified Angus	+ \$4.50/cwt
Choice or higher	USDA Cutout spread × weight difference above 52% (premium)
Select	USDA Cutout spread × weight difference below 52% (discount)
Hardbone	- \$15.00/cwt
Ungraded	- \$2.00/cwt
YG 1	+ \$3.00/cwt (Premiums only, no discounts)
YG 2	+ \$1.50/cwt (Premiums only, no discounts)
YG 3	Par
YG 4	- \$12.00/cwt
YG 5	- \$20.00/cwt
550/Down*	- \$15.00/cwt
975/Up*	- \$15.00/cwt
Unbranded native, heavy steer hides**	+\$3/hide

\* Out weight carcasses are included in determining the averages for Quality and Yield grades.

\*\*USPB pays a \$3 per head premium on **native, heavy steer hides** on a pen-by-pen qualifying basis. Seventy-five percent of the cattle in a pen must be **unbranded steers** in order for a pen to qualify. On qualifying pens, 100% of the animals receive the \$3 per head premium.

It is understood that the premium/discount structure will be modified as new programs are developed that warrant inclusion.

#### Settlement

All cattle sold on the USPB grid will be issued a cash advance on the day of delivery equal to 85% of the weighted average live price for the week prior to delivery. A final check will be issued when final grade and plant averages are determined, typically Monday or Tuesday of the week after delivery.

#### Freight

National Beef is responsible for lining up transportation and for all costs associated with transporting live cattle from the feedyard to the plants. However, freight charges in excess of \$.55/cwt will be deducted from cattle proceeds.

#### Carcass Data

Individual and group carcass data will be provided at no charge.

#### Forward Contracting

U. S. Premium Beef will offer to members selling cattle under the grid the option to forward contract cattle up to 6 months in advance. Each week a basis will be offered for future delivery periods. All forward contracting intentions must be communicated to the central procurement office with order execution during market hours.

# Appendix B

## USPB SETTLEMENT SHEET

### SAMPLE

USDA Weekly Weighted Average	
USDA W Kansas Wgtd Avg.	64.93
Formula Allowance	0.25
<b>Base Live Price</b>	<b>65.18</b>
 Combined Plant Avg. Hot Yield	 62.86
<b>Base Hot Price</b>	<b>103.69</b>

USDA 4 Week Weighted Average	
USDA Choice 700/850 Cutout	106.03
USDA Select 700/850 Cutout	98.28
<b>Choice Premium</b>	<b>7.75</b>

Program:	USPB	# Head:	100	steers		
Plant:	Liberal or Dodge City					
Kill Date:		Live Wt:	120,000	Avg Wt: 1200		
Feedyard:	XYZ Feeders	Hot Wt:	76,140	Avg Wt: 761		
Lot#:	105					
Pen#:	63	Hot Yield:	63.45%			
USPB Lot#:	1900					
	Actual	Plant Average	Weight Difference	Premium/Discount	Hot Price	Total Value
Actual Hot Weight	76,140				\$103.69	\$78,949.57
Premiums/Discounts						
Choice or Higher	63.33%	52.00%	8627	7.75		\$668.59
Prime	2.69%		2048	9.00		\$184.32
CAB	22.60%		17208	4.50		\$774.36
Hardbone	1.00%		761	-15.00		-\$114.15
Ungraded	0.80%		609	-2.00		-\$12.18
Total Quality Grade						\$1,500.94
YG1	5.01%	11.67%	-5071	3.00		\$0.00
YG2	52.00%	49.24%	2101	1.50		\$31.52
YG3	39.52%	36.99%	1926	0.00		\$0.00
YG4	3.47%	2.10%	1043	-12.00		-\$125.16
YG5	0.00%	0.00%	0	-20.00		\$0.00
Total Yield Grade	100.00%	100.00%				-\$93.64
550/Down	2.02%		1538	-15.00		-\$230.70
975/Up	1.28%		977	-15.00		-\$146.55
Total Out Weights						-\$377.25
Native Hide Premium (steers only)				0.00		\$0.00

<b>Total Premiums &amp; Discounts</b>	<b>\$1,030.05</b>
---------------------------------------	-------------------

<b>Gross Carcass Value</b>	<b>\$79,979.62</b>
Less Excess Freight	\$0.00
<b>Net Carcass Value</b>	<b>\$79,979.62</b>
 <b>Equivalent Live Price</b>	 <b>66.65</b>
<b>Equivalent Hot Price</b>	<b>105.04</b>
 Net Premium/Discount per head vs wgt'd avg live price	 <b>20.64</b>



## South Dakota Soybean Processors

*by Rodney J. Fink*

*Abstract: South Dakota Soybean Processors, Inc. of Volga South Dakota has successfully united more than 2100 producers to provide the funds and management direction to initiate a successful cooperative. Producers from South Dakota, Minnesota, North Dakota and Iowa provided more than \$21 million to build the first soybean crushing facility in the U.S. since 1978. Initial crush was projected to be 16 million bushels per year and the crush has increased to a capability of 27 million bushels per year. After three years of operation, soybean basis for the region has improved by about 25 cents per bushel (for all producers) and SDSP has paid member owners \$9.2 million in cash patronage. Economic activity in the region, as a result of SDSP, has increased by at least \$175 million.*

South Dakota Soybean Processors, Inc., a new generation value-added cooperative, is owned by 2,103 producers who live in Minnesota, South Dakota, North Dakota and Iowa. The mission statement of South Dakota Soybean Processors (SDSP) follows:

“South Dakota Soybean Processors is a value-added cooperative of agricultural producers with emphasis on adding value to soybeans. Our goal is to be financially strong and make a maximum value-added payment to our members while maintaining growth and stock value. South Dakota Soybean Processors will maintain a competitive position in the marketplace by providing quality products to our customers with highly efficient and cost-effective processes.”

“South Dakota Soybean Processors will ensure success through teams of dedicated and competent directors and associates. We will seek to meet the needs of our members in a friendly and professional manner, and to listen to suggestions from members, associates, and customers.”

### Background Information

SDSP is located in east Central South Dakota (Brookings County) in the town of Volga, about 30 miles from the Minnesota border. In 1990, Volga had a population of 1,263 (U.S. Bureau of the Census). By 1996 the population was estimated at 1,316 and population is assumed to have grown since that time. Brookings, the county seat of Brookings County (fourth most populous county in S.D.) is located eight miles east of Volga. The 1997 estimated population of Brookings County was 26,186. The 1996 per capita income in Brookings County was \$18,939, or 91 percent of the state's average per capita income of \$20,436 and 78 percent of the national per capita personal income average of \$24,436 (US Bureau of the Census, 1998).

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The author would like to acknowledge the time and assistance of South Dakota Soybean Processors (SDSP) CEO Rodney Christianson, Vice-Board Chairman Marvin Hope and others associated with SDSP. Their assistance is greatly appreciated.

South Dakota State University is located in Brookings and is a major employer in the region. The region served by SDSP consists of grain and livestock farmers with the main crops being corn, soybeans, wheat, oats and alfalfa. Membership in SDSP is primarily family farms although some local elevators and Hutterite communities have membership and equity units of participation. The Hutterite communities also purchase significant amounts of meal for their livestock operations.

Planning for the cooperative started in 1992 when a feasibility study was sponsored by the South Dakota Soybean Research and Promotion Council. Organizers first tried to attract a processor to build a plant in the region, without success. After some thought, organizers said “Why don’t we do it ourselves?” The study suggested such a plant would be a good investment and this led to 15 meetings of farmers throughout South Dakota in early 1993.

In late 1993, a group of soybean producers, acting as incorporators, established South Dakota Soybean Processors. This group, serving as the initial board of directors, updated the feasibility study and proceeded to plan for the building and operation of a soybean processing plant in South Dakota. Four sites were proposed for the facility and the board voted (November 1994) to build the \$32.5 million dollar plant in Volga, South Dakota. Ground breaking ceremonies were held on August 21, 1995 and this signified the nation’s first new soybean crushing plant to be built since 1978.

The early stages of organization required a great deal of effort. The nearby Minnesota Corn Processors found their new generation cooperative to be a good investment and this success made fund raising easier. The current SDSP Board President and other organizers traveled to almost 200 meetings, often two or three per day, and met with at least 6000 producers. They often started out at 6:00 A.M. and returned after midnight. The current president recalls that in one day and one-half period, he received 120 phone messages. He reported his cellular phone bill reached \$435 during one month.

During the plant planning stages, the state’s soybeans (about 90 million bushels) were shipped out of state annually for processing. About 40 percent were shipped back for feed. The state’s soybeans were sold to processors in Minnesota, Iowa, Nebraska and other neighboring states. By building a plant, farmers hoped to gain in several ways. With lower shipping costs, prices will be higher for soybeans because the market is local, and farmers can purchase soybean meal without paying the added freight charges. Since crushing commenced in late 1996, the basis for soybeans has narrowed by about 25 cents per bushel and the production of soybeans in the state has increased to about 130 million bushels. Initial crush output was estimated to be 16 million bushels per year but has increased to approximately 27 million bushels per year. Plant promoters banked on a growing domestic and worldwide demand for soybean products. More than one-half of U.S. soybean production is crushed while roughly one-third is exported. Planners pointed to an increased demand by China and the possible use of soy fuel, a clean burning fuel, for mass transit equipment.

The component of a bushel of soybeans contains approximately 11 pounds of oil and 48 pounds of protein-rich meal. Food ingredients are the primary end use for oil, while meal is

consumed mostly by animals. Soybean oil dominates the edible portion of U.S. consumption of fat and oil as nearly all soybean oil is used in a food application. More than 82 percent of U.S. fats and oils edible consumption is soybeans (followed by oils of corn, tallow, rapeseed, lard, coconut and peanuts). Of the U.S. soybean oil consumption, salad/cooking accounts for 38 percent; baking/frying for 45 percent; and margarine 14 percent. Of the soybean meal used domestically, nearly all is used in livestock and poultry feed with poultry and swine clearly dominating usage (poultry 52 percent and swine 29 percent).

### **Soybean Processing Alternatives**

Soybean processing depends on the market available, the price of product (oil and meal) and meal quality. Three general types of soybean processing plants are in use and each provides various alternatives for processing. In order to maintain genetic purity from identity preserved soybeans, there is interest in the smaller units using extruder/expeller technology. Van Dyne and Blase in a study of marketing implication of biotechnologically engineered, identity-preserved soybeans evaluated three different sizes of processing technology [Van Dyne and Blase]. These included:

1. Extruder/Expeller technology which is a small scale plant generally used in conjunction with a feed mill. The volume of these plants is generally small, often less than 1 million bushels per year.
2. Preheat steam/Expeller technology relies on steam preheat of the soybeans followed by the use of expellers to separate the oil and meal fractions. These plants are intermediate size plants generally used to extract oil from six to 12 million bushels per year. The capacity is easily expanded by adding an additional expeller to the system. A single expeller can be assigned to process a unique product such as an identity-preserved soybean, if desired.
3. Conventional Hexane plant which uses a chemical (Hexane) extraction and which is clearly the largest facility of the three. Such plants have the advantages of economy of scale and the ability to remove all but about 1 percent of the oil from the soybeans. Typically, the per unit value of oil is about twice the per unit value of meal. The average annual crush of such plants in the U.S. is about 27 million bushels per year. The SDSP plant is a chemical extraction plant and although the initial crush estimates were for 16 million bushels per year, the crush is now approaching 27 million bushels per year.

The first two plants are usually added to an existing feed mill while the larger plant is a “stand alone” plant. With many extruder/exceller plants, the meal volume is small enough that it may be consumed in the local area; only the oil needs to be shipped. The characteristics of the three plant sizes considered follows:

**Table 1. Characteristics of Three Soy Processing Plants**

<i>Characteristics</i>	<i>Extruder/Expeller</i>	<i>Steam Pre-heat Expeller</i>	<i>Hexane</i>
Volume of soybeans processed (bu/yr)	572,000	6,000,000	16,000,000
Volume of meal produced	14,814	149,700	380,800
Capital Investment (investment estimated in 1997)	499,370	10,000,000	32,750,000

*Source:* Van Dyne and Blase 1998.

Van Dyne and Blase projected operating costs for the three selected operations and determined costs of operation (utilities, maintenance, labor, administration and interest on capital) per bushel processed to be as follows: Extrusion/expeller plant—\$0.52; Steam/expeller plant—\$0.38; for the Hexane plant—\$0.44. The smaller expeller plants are often associated with an existing feed and grain elevator and some of the infrastructure costs are shared costs. The expeller plants do not remove all of the oil from the soybeans so in order for them to be competitive, they must receive a premium for their meal (which retains some of the residual oil).

The output fractions of a bushel of soybeans from the alternative processing plants follow in **Table 2**.

**Table 2. Output Fractions from a Bushel of Soybeans from Alternative Processing Plants**

<i>Component</i>	<i>Extruder/Expeller</i>	<i>Steam/Expeller</i>	<i>Hexane</i>
Total meal (pounds)	51.8	49.9	47.6
High-oil meal (pounds)	51.8	49.9	—
Hulls (pounds)	—	—	2.0
Oil (pounds)	7.3	9.0	11.1
Moisture evaporated	0.9	1.1	1.3
<b>Totals</b>	<b>60</b>	<b>60</b>	<b>60</b>

*Source:* Van Dyne and Blase 1998.

The expeller operations capture less oil (per bushel of soybeans) to market and in order to be profitable, must receive a higher price for the high-oil meal. The actual price received by firms marketing high oil meal varies and tends to range from zero to \$30 per ton, relative to 44 percent protein meal. The SDSP operation was designed to process a large quantity of soybeans and receive the best possible price for the products. The selection of the Hexane plant was an appropriate decision to meet their needs and expectations. In any plant selection by a group of producers, they should first decide what they want to accomplish, establish firm goals and objectives and then select the processing system that can accomplish their desired goals and objectives.

## Soybean Crush Margins

The gross crush margin is an important factor in estimating plant profitability in current plant processing systems. The gross margin is the total receipts of product and co-product sales minus the cost of purchasing the soybean feedstock. Thus the gross margin includes all costs of processing the soybeans into a product and co-products, the return on investment, risk, normal profits, plus other factors. Gross profit doesn't remain constant over time and is estimated monthly by the Federal Government. Factors influencing gross margins are a carry over of soybean supplies, production, level of competition, domestic and international demand, and others. Between September 1986 and May 1997, about 70 percent of the monthly gross margins occurred in the \$0.71 to \$1.10 ranges. However, the range during this period was from a low in the 40 cents per bushel range to one occurrence in the \$1.70 range. The gross margin from the CBOT for 1998 and 1999 follows:

**Table 3. Average CBOT Soybean Crush Margins**

<i>Months of Year</i>	<i>Crush Margin for Harvest Year 1998 (1997-1998)</i>	<i>Crush Margin for Harvest Year 1999 (1998-1999)</i>
September	\$0.70	\$0.33
October	0.72	0.31
November	0.68	0.21
December	0.51	0.24
January	0.34	0.19
February	0.30	0.18
March	0.19	0.18
April	0.12	0.22
May	0.16	0.21
June	0.09	0.21
July	0.17	0.26
August	0.39	0.20
Average	0.36	0.23

*Source:* SDSP 1999 Annual Report.

Average crush margins reached a 20-year low in 1999 averaging only 23 cents per bushel compared with 36 cents in 1998. To maximize profits, a processor must establish positions when the margin is wide (such as in September through November of 1998) to maximize profits. When soybeans are plentiful, such as at harvest season, soybeans are relatively cheap while oil and meal prices usually are not so variable and the margins tend to widen during this period. This was quite true in 1998 but in 1999, the margin remained flat throughout the processing year. When soybean supplies are tight, farm gate prices are driven up and even though meal prices are driven up also, the overall processing margin normally decreases. This is a typical scenario during the summer and fall prior to soybean harvest. The 1998 harvest showed that crushing margins do not always follow such a scenario. SDSP maintains deposits with a brokerage firm

which are used for risk management as they use futures and option's contracts to manage the risk of commodity price volatility of soybeans, oil and meal.

## **SDSP Beginnings**

Following incorporation, SDSP was authorized to sell up to 2,500 shares of common stock and 80,000 shares of preferred stock. Each voting member is required to purchase one share of common stock and only the common stock was offered for sale. At least 85 percent of the voting shares must be owned by farmers and this includes landlords and tenants who receive as rent a portion of the products produced on the land (not to include timber or forest products). Each member must buy one share of common stock.

The cooperative is a closed cooperative, that is, one in which no new member-shareholders will be admitted other than by transfer of existing shares or by an expansion of SDSP's capacity to process soybeans. Distribution of patronage will be annually in cash, credits, capital stock, certificates of interest, revolving funds certificates, letters of advice, or other certificates or securities of SDSP or in any combination allocated to patrons on a patronage basis. Each member is entitled to one vote on all matters submitted to a vote by the members.

Original subscribers agreed to purchase one share of common stock at \$200 (with par value of \$1.00) and a minimum of 2,500 equity units. One-half of the stock purchased was used as operating money for organizers working capital to initiate the project. Each equity unit purchased obligated the buyer to deliver one bushel of soybeans to SDSP annually. Equity units were sold at \$2.00, 2.25 & 2.50 per unit with an average equity unit price of \$2.19 with the average investment per member of about \$10,000. Originally 9,419,500 equity units were sold and, by action of the board of directors, this was increased on a three for two basis so now 14,129,250 equity units exist (increasing the requirement for each member to deliver soybeans).

Membership must consist of 85 percent active producers and this is maintained by only approving transfers of shares to an active producer. Fund raising started in South Dakota and in the first year \$9 million was committed by South Dakota producers. Further efforts in Minnesota increased commitment up to \$20 million (about one-half from Minnesota). The Board is represented by members from seven districts: four from South Dakota, two from Minnesota and one district representing all remaining Minnesota counties, all North Dakota counties and all states located outside of South Dakota, Minnesota, Iowa, and North Dakota.

## **Transfer of Shares and Equity Units**

Shareholders may generally transfer their stock and equity units to immediate family members, a family farm corporation or partnership in which the member is a shareholder, an owner, partner or shareholder of a dissolved partnership or a new entity following completion of a merger. Other transfers of shares and equity units must be to producers and can take place only after the shares of common stock and equity participation have been offered to every other member-shareholder of the cooperative. If more than one shareholder of the cooperative desires to purchase additional shares, they may do so at the price offered. In the event no members of the cooperative want to purchase the shares and equity units of participation, the member,

shareholder, may, subject to the consent of the Board, transfer the common stock and equity units of participation to the originally proposed transferee, assuming the producing entity is eligible for ownership. Some shares have transferred to other ownership as the original number of equity owners was 2,087 and is currently at 2,103. The most recent sale of Equity Units was completed on April 18, 2000. They sold between \$2.90 and \$3.30, with an average price of \$3.10 each. When Equity Units are offered for sale, members have a right to bid for increments of 250 Equity Units and they have a right to better their bids. The offer to bid by members is contained in the monthly SDSP publication (Bean Stock).

### **Member Delivery of Soybeans**

Equity stock issued currently totals 14,219,500 shares. The Board will modify the call for delivery each year to provide the volume of soybeans needed to meet the yearly business plan. Currently, the call per equity unit is 1.8 bushel. SDSP has a marketing pool which will purchase soybeans on behalf of the equity owner. If the supply from farm delivery is insufficient, purchases can be made from other area grain elevators.

### **Board of Director Representation**

Board members are elected for three year terms with three directors from each of the seven districts. One-third of the members are elected each year and elections are held at the SDSP annual meeting. Amended SDSP bylaws allow for three (3) consecutive terms (vs. two originally). The Board generally meets monthly and whenever special meetings are called. The SDSP annual meeting must be held within 180 days of the close of the cooperative's fiscal year, at a time and date determined by the board of directors. Officers of the cooperative are a president, vice-president, secretary and treasurer and are appointed by the board. Four standing committees (public relations, planning, governance and financial/audit) play an active role in providing input and direction to the board and to the CEO.

*The public relations committee* consists of six board members who maintain good relations with other cooperatives, the community and the broader public. They also strive to see that good communications are provided to members and to help maintain harmony between diverse interest groups of the organization. The committee goals are to maintain a strong and growing image of SDSP's business goals by realizing that the cultivation of financial or political support of its fellow members, producers, the general public and government officials will help meet this goal. The committee will focus on the development of nonmember interest in the cooperative and to assist in increasing the value of owner shares.

*The planning committee* consists of eight board members who provide assistance to see that the cooperative is positioned for sound growth, sound planning, good budgeting procedures and recommendations for changes in assets. The main committee goal is to provide direction, governance and resource allocation to SDSP's associates in achieving their mission in future years. Execution of duties includes an annual review and recommendations to guide capital investments, an annual audit of selected capital projects (and all projects exceeding a \$500,000 investment), review and recommendation of investment projects and other reviews called for by the CEO or board.

*The governance committee* consists of four board officers and committee designates who provide assistance with the full board core responsibilities. They meet SDSP goals of providing direction to the board of directors and CEO by providing supervisory guidance to the CEO, review and direction in SDSP's legal responsibilities, approval of CEO's selection of key management personnel, selection and recommendation of SDSP's CEO and to review and recommend modification of organizational structure and salary schedules.

*The financial audit committee* consists of seven board members who assist the board by reviewing and recommending the fiscal year operating budget and to safeguard SDSP assets. The committee goal is to provide recommendations for the direction, governance and resource allocation to SDSP associates. They help maintain the overall SDSP goal of remaining financially strong while making a maximum value-added payment to members, maintaining growth and stock value and safeguarding the assets of the cooperative.

During the construction stage, the board of directors was directly involved in the process of managing the operation. The board continues to make contributions to the operation through active participation in regular meetings and through work on the standing and ad hoc committees in operation. Several new innovations, including the idea of entering a partnership with Urethane Soy Systems Company, Inc. came about as a result of a Board member's idea. The CEO for SDSP had 20 years of experience with a major soybean processor prior to his selection and brought a great deal of experience and expertise to the organization. The Board and CEO, in concert with other key employees of the plant, are good "role models" of how an organization can work in harmony to achieve well-established goals of the organization.

SDSP has clear goals designed to serve the 2,100 plus members of the Cooperative. These are to:

1. Provide maximum value-added payment to shareholders. The intent, in general, is to return about 70 percent of the profit to cooperative members and use the other 30 percent for retiring debt and growing the company.
2. Maintain the stock value, or value of equity units, of cooperative members.
3. Maintain a growth perspective of SDSP. This has been successfully accomplished as they have provided oil storage for the Chicago Board of Trade (a profitable operation), increased the plant capacity from 50 thousand to 80 thousand bushels per day, made improvements in their marketing procedures for soybean hulls and have expanded by forming a partnership with a new product, SoyOyl™, a component of the Urethane business (Oil Crops Yearbook, 1998).

## **Operational Process of the Plant**

SDSP is located on a 40-acre site on the east side of Volga, south of Highway 14 (main highway through Volga). The entrance to the plant, located 8 miles west of Brookings, S.D. has changed the flow of traffic since SDSP began processing. Some of the soybeans to be processed come from other elevators but the majority, about 75 percent, come by truck delivery from farmers. The facilities are very streamlined for handling soybeans received either by rail or by

truck Trucks are weighed on a 120-foot scale and then proceed to truck and rail receiving where soybeans are sampled for moisture and grade and then pre-cleaned before being dried.

SDSP has a processing capacity of more than 80,000 bushels per day so they turn over quickly. The drying capacity is over 5,000 bushels per hour and after drying, they go to a preparation area where they are cleaned, cracked and dehulled and moved by conveyor for oil extraction. Oil is extracted and distilled using liquid Hexane in a washing process that removes the oil. The exposure to Hexane draws oil from the flakes and in addition to oil, produces soybean meal. Each bushel of soybeans yields approximately 11 pounds of oil and 48 pounds of meal.

Oil goes to crude storage tanks where it is sampled for quality before being pumped into storage. The oil is sold for the manufacture of products such as margarine, shortening, glycerin, printing ink, paints, soaps, linoleum, plastic, rubber substitutes and biodiesel fuel. The meal is further processed to meet customer's specifications. If a customer wants a lower percentage protein meal, the raw meal is blended with soybean hulls to lower the protein content. Meal is used for animal feed (or as a feed additive or ingredient). The final phase of the operation is the loading of the oil and meal on trucks and train cars for shipping to manufactures for further processing into final products.

They use a high-tech automated weighing system which enables SDSP to automate the ticket process (<http://www.agris.com>). The weight is taken and automatically printed and recorded with minimum chance of human error. The entire process is computer generated to provide rapid, accurate and dependable records. With the large number of trucks coming each day, the job of creating tickets by hand would be very difficult. When the truck pulls on the scales and the operator types in the license plate, information on the customer automatically appears on the screen. Weights and grades are automatically gathered from scales and grading equipment and entered. Other high tech controllers are used in the plant such as the programmable logic controller which is monitored continuously for overall system monitoring and control.

### **Additional Innovations**

Organizers of SDSP had a vision of not only a soybean processing plant but also the development of a consumer business where even more value could be added to members' soybeans by moving one step closer to the consumer. A move in this direction was realized in late 1999 when SDSP announced its partnership with Urethane Soy Systems Company, Inc., a manufacturer of SoyOyl™ (<http://www.brookings.net/sdsp/pr-soyoyl.html>). The product utilizes crude soybean oil, a renewable resource, as the base for countless industrial products, making today's producer a more environmentally friendly partner in the global universe. This technology is the only one of its kind in the world and a portion of the technology is exclusive to SDSP. The board and management of SDSP are looking for ways to return maximum value-added payments to members, and are continually pursuing such opportunities to strategically position the cooperative in the soybean industry. Another innovative and profitable step made by the board and management of SDSP was the construction of a large storage tank for soybean oil which is characterized as an

innovative investment in terms of risk management. They maintain their own storage for grain obligated on futures contracts to the Chicago Board of Trade and are able to save in storage costs in this manner.

### Plant Capacity

SDSP has been able to increase processing capacity each year while reducing its operating expenses. The following changes in volume processed illustrates their ability to upgrade the plant to handle a larger daily crush:

**Table 4. Change in Volume Processed**

<i>Commodity</i>	<i>Unit</i>	<i>1999</i>	<i>1998</i>	<i>1997</i>	<i>Pct. Change 1999</i>	<i>Pct. Change 1998</i>
Soybeans Crushed	Bushels	24,150,363	21,722,885	13,453,916	11	61
Soy Meal Produced	Tons	539,456	483,410	299,391	12	61
Soy Oil Produced	Tons	134,998	119,959	72,842	13	65
Soy Hulls Produced	Tons	35,136	41,039	23,343	-14	76

*Source:* Annual Report 1999; Annual Report 1998

While they were able to increase capacity each year, this has been done without a proportional increase in operating expenses. As volume increased, the operating cost per bushel processed decreased due to improved operating efficiency. The changes in earning structure are apparent in the following table:

**Table 5. Changes in Earning Structure**

<i>Crop Year</i>	<i>1999</i>	<i>1998</i>	<i>1997</i>
Bushels Crushed	24,150,363	21,722,885	13,453,916
Gross Proceeds	\$12,774,917	\$16,667,876	\$9,635,050
Operating Expenses	\$(9,861,569)	\$(9,998,046)	\$(8,045,239)
Interest Expense	\$(707,644)	\$(1,286,172)	\$(1,964,815)
Non-operating revenue	\$1,769,289	\$1,768,002	\$890,698
Patronage Revenue	\$648,443	\$1,359,820	\$51,524
Net Proceeds	\$4,623,436	\$8,511,480	\$567,218

*Source:* SDSP 1999 Annual Report.

The low crush margins of 1999 caused a reduction in net profit compared with 1998. Van Dyne and Blase had estimated expenses (1998) of slightly more than \$7 million for a plant processing 16 million bushels per year. They also predicted a higher net profit as they used the long-term average gross margin of about 73 cents per bushel. SDSP had initial operating costs slightly higher than Van Dyne & Blase estimated in their first year of operation, but in 1998 and 1999, their operating expenses were less than those projected. Their ability to increase volume and keep operating expenses down enabled them to register a profit, even in the difficult year of

1999. Average crush margins reached a 20-year low of 23 cents per bushel compared with 36 cents in the previous year. In 1998, SDSP took advantage of high margins in the fall and established positions before the crash of the summer of 1998. Differences in earnings between 1998 and 1999 are quite evident as gross proceeds dropped 24 cents per bushel. With efficiencies, staff experience and lower interest rates, SDSP reduced to drop operating and interest expenses by 8.7 cents per bushel in 1999.

## Operating Profits

In keeping with the most emphasized line in the mission statement, which is “making the maximum value-added payment to our members,” SDSP distributed \$5,822,558 in 1998 and \$3,436,451 in 1999 to member owners. Distribution of profits from the corporation has approximated their board goal of around 70 percent (74 percent in 1999 and 68 percent in 1998). The 1999 distribution of dividends was in a period when members received some of the lowest prices for their soybeans in many years. A summary of profit distribution and utilization follows:

**Table 6. SDSP Profit Distribution and Utilization**

<i>Disbursement</i>	<i>Fiscal Year 1999</i>	<i>Fiscal Year 1998</i>
Allocated to Members	\$4,623,436	\$8,511,477
Cash Paid to Members	\$3,436,451 (74 percent)	\$5,822,558 (68 percent)
Cash Retained by SDSP	\$794,999 (17 percent)	\$1,430,331 (17 percent)
Equity Patronage Retained	\$617,214 (13 percent)	\$1,258,588 (15 percent)
Total Profits	\$4,623,436	\$8,511,477
Total Patronage Retirements	\$ 225,228	—

Source: SDSP 1999 Annual Report.

## Financial Position

SDSP has continually upgraded its plant capacity and anticipates reaching a daily crushing capacity of 100,000 bushels in the next few years. They are currently able to crush 80,000 bushels per day and should be able to reach the stated goal. In addition, they are looking at the development of other value-added products and would like to see a significant part of their profits from such ventures. One possibility under consideration is refining oil produced at the plant.

Stock value has increased substantially since inception, having more than doubled since the initial offering. The value of equity units continues to increase from an average sales price of \$2.49 in 1998 to \$2.86 in 1999. The increase in the trading price of equity units can be attributed to producer confidence generated as the plant continues to prosper. The average of April 2000 sales was \$3.10 per equity unit. The debt to equity ratio at the end of FY99 was 48.4 percent compared to 49.1 percent in FY98. Their production has increased each year and the interest expenses in FY99 were only 2.9 cents per bushel processed compared to 5.9 cents per bushel in the previous year. The reduced interest cost was due to a restructuring of the loan with CoBank,

(so that better use could be made of excess cash during the year) and because of lower interest rates.

### **Incentives Provided SDSP**

Most of the capital and drive for this facility have come from organizing farmers and shareholders. The original feasibility study was funded by the South Dakota Soybean Research and Promotion Council and an additional \$1 million low interest loan was obtained for the project. A .5 million low interest rate loan was obtained for railroad spur and service and Brookings County agreed to phase in the property taxes over a five-year period.

### **Problems Encountered**

The creation of SDSP has demonstrated that it is possible for U.S. agricultural producers to participate in and find success in value-added agriculture. It has also shown that it is possible for such an operation to compete successfully in an enterprise formerly dominated exclusively by large enterprises. The playing field, however, isn't always level as has been experienced by SDSP. The core leadership needs innovative thinking and managerial skills outside their competencies. They must be able to see through feasibility studies by individuals or corporations they might work with who might work for the demise of the project. For example, two of the nations' major soybean processors have shut down part of their capacity at this time and this could be a discouraging factor to farmers wanting to set up a value-added operation.

Value-added cooperatives must learn to cut the "red tape" that is a part of the requirements for funding availability of essential government programs and if SDSP decides to expand into another major project, they may need to raise additional capital to meet restrictions of such loan programs. Railroad rates established by the Burlington Northern Santa Fe (BNSF) have been unfavorable to SDSP. Rates established by BNSF apparently are market-based and as such, represent a greater cost for shipping meal exists for SDSP than for a similar product shipped from locations that are a greater distance than Volga. For example a shipper from Council Bluffs ships meal to Sweet Grass, Montana for \$1.38 per mile and SDSP pays \$2.12 for only two-thirds of the distance. This difference in rail cost gives the appearance that the rates established by the BNSF are based on the delivered price of meal rather than the actual cost of rail distance.

In addition, the Chicago Board of Trade has implemented changes that single out and target SDSP while not affecting the other 40 delivery locations. The anti-competitive and near monopolistic practices of industry giants must be considered and guarded against in SDSP and other value-added operations.

Some of the hurdles that had to be crossed included finding a reasonable site with an adequate water supply, soil capable of supporting major structures, economical utilities (gas and electricity), highway and rail access and availability of an air quality permit. Each of these steps took considerable time and study by board members who led the drive.

## Economic Activity Review

The Brookings Area Chamber of Commerce provided data that estimated the economic activity for the region as result of SDSP. The activity during the construction phase and the first three years of operation are impressive for the region. Their data provides an average and high estimate of economic activity which follows:

**Table 7. Estimated Economic Activity Generated by SDSP**

<i>Construction phase</i>	<i>Average Estimate (millions \$)</i>	<i>High Estimate (millions \$)</i>
Original—\$32.7 million	49.0	65.4
Development Expense—\$1.5 million	2.3	3.9
Reinvestment—\$9.0 million	13.5	18.0
Total Investment	64.0	87.2

*Source:* Rodney Christianson (Data from Brookings Chamber of Commerce).

After three years of operation - 60 million bushels processed

**Table 8. Estimated Economic Activity As a result of SDSP**

	<i>Average Estimate (millions \$)</i>	<i>High Estimate (millions \$)</i>
Operating Expenses (\$32 million/\$7.6 payroll)	49.3	53.5
Soybean Basis Input— 120 million bushels/0.20 per bushel	40.0	40.1
Value-added Payment— \$9.2 million	18.4	27.6
<b>Total Operational</b>	<b>107.7</b>	<b>121.2</b>
<b>Grand Total (three years)</b>	<b>171.7</b>	<b>208.4</b>

*Source:* Rodney Christianson (Data from Brookings Chamber of Commerce).

The economic activity was a welcome addition to the region and when the full taxes are paid by SDSP (end of five years), the community will experience greater benefits. The operation employs 64 full-time employees and supports many others because of the activity of 100 or more trucks bring soybeans to the complex daily. Since the inception of SDSP, a new full-service truck stop has been built across the street from the plant. As the plant initiates more endeavors (value added programs for example), the economic effects to the region will continue to increase.

## SDSP Customers

Ninety-five percent of the product marketed is in the oil and the meal produced (Site Visit, 2000). SDSP receives revenue from oil sold to CENEX Harvest States Processing and Refining in Mankato, Minnesota. Meal is typically sold within South Dakota, Canada and the Pacific northwest. Hulls are sold either as “loose hulls” or as pellets, locally and within the region. The

South Dakota Hutterite communities have major livestock operations and are major purchasers of hulls and meal.

## **Summary and Lessons Learned**

SDSP has been in operation since late 1996. Initial formation steps were taken in 1992 (Feasibility study), followed by a producer group's interest in developing the idea in 1993, and by ground breaking in 1995. This was the nation's first soybean crushing plant built since 1978. The producer's group acted as incorporators and served as the initial SDSP board of directors. They updated the feasibility study, planned the building and operation of the processing plant, circulated a prospectus and offered stock to potential investors in South Dakota and Minnesota.

In November of 1993, the State of South Dakota granted cooperative status to SDSP. The plant capacity has continually increased and proven to be profitable. This is true even in a period of very low soybean prices and narrow crush margins. The cooperative is a "new generation" cooperative owned by more than 2100 farm families from South Dakota, Minnesota, Iowa and North Dakota. The cooperative goals of adding value to members' soybeans, maintaining a financially strong business, and providing a major return of revenue to member owners has been realized. In addition to crushing and processing soybeans into meal, oil and hulls, SDSP has been able to move a step closer to the consumer business by a partnership with Urethane Soy Systems, Inc., a manufacturer of SoyOyl™. Following the completion of SDSP's third operational year (August, 1999) the cooperative had achieved the following.

1. Added value to 60 million bushels of producers' soybeans.
2. Generated between \$175 and \$208 million of economic activity in the region.
3. Returned \$9.2 million in cash patronage to members.
4. Raised more than \$21 million from farm families to build the business.
5. Committed or reinvested more than \$20 million of additional capital into the business.
6. Reduced the basis for soybeans sold by farmers by about 25 cents per bushel, by the presence of SDSP in the region, thus improving the income of both members and non-members.

Many lessons have been learned from the experiences of this new generation cooperative. The current board president and other soybean producers had a vision of creating a new, farmer-owned soybean processing facility. They were able to obtain good information through a feasibility study. By learning the mechanics of the business, they directed the creation of the cooperative. Farmer members conceived the idea and had the dedication and desire to commit the work that convinced other farmers (2,100 others) that this was a good idea and would enable producers to succeed in value added processing. By so doing, they could capture a larger share of the food dollar for the commodities grown. The success of this venture was possible because the leaders were totally dedicated to the project and gave freely of their time and other resources to make the idea a reality. The task was made somewhat easier, especially with the

Minnesota members, because Minnesota producers had already experienced success in value-added processing. The SDSP board recognized the value of a professional manager in the business and had the foresight to select a CEO with experience in the field and was able to provide additional guidance to grow the company. Board members continue to play a vital role in the company through their regular meetings and activity on four major committees that provide guidance to the CEO and full board. Board members receive pay for their services and continue to grow in their ideas and service to the company.

Because of their experience in the formation and operation of the cooperative, board members (or implementors of value-added cooperatives) have become very knowledgeable about the business and continue to make substantial contributions to the business. For producers to create a value-added processing operation their leadership must be totally dedicated and be willing to give freely of their time to the project. They must learn a new way of thinking and learn new skills and business principles. The tasks that must be accomplished by such a group are:

- Have a vision and visualize what is needed.
- Develop a feasibility study that predicts the potential success of the operation.
- From the feasibility study, create a prospectus that can be used to convince others that they should be a part of this venture.
- Create a business plan that can be used for acquiring capital to run the business.
- Create a capital formation plan, learn to understand the security laws of the state and conform to them.
- Be able to understand the steps necessary to obtain the necessary permits and documents needed for funding at the local, state and Federal (in the case of a USDA loan guarantee) levels.
- Develop an organizational structure for the cooperative that enables a diverse group of owners to function in an orderly and decisive manner.
- Be ready to hire professional help (management for example) as needed to have the skill needed for such an operation, and
- Be able to attract a sufficient number of producer members to provide both the capital and the commodity to be processed for the operation.
- Networking between farmer-owned, value-added cooperatives becomes a necessity if producers plan to obtain a greater portion of the processors profit. The logical place for groups interested in creating value-added cooperatives to seek help is through cooperatives who have experienced success in the process (such as SDSP who has indicated a willingness to consult with such groups). Producers should be willing to pay successful cooperatives for assistance with feasibility studies, operational techniques and management assistance.

Growing such a business is a difficult, time-consuming task that has many potential pitfalls but, as the members of SDSP have discovered, when successful it provides a great deal of personal and financial satisfaction.

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## **Iowa Turkey Growers Cooperative and West Liberty Foods**

*by Mary Swalla Holmes and Daniel Curry*

The last thing any Iowa turkey grower wanted to do in 1996 was invest in a packing plant. Not one of them was looking forward to sitting on the board of a multimillion dollar business, negotiating deals with top food companies. As the food chain shortened and the turkey industry integrated, however, choices became limited. When faced with one of the toughest decisions of their lives, the growers chose to remain independent by forming a cooperative. Forty-five Iowa turkey growers took the future into their hands, persevered through low prices and hard times, and came out on top. This is the story of the Iowa Turkey Growers Cooperative and West Liberty Foods.

### **Plant Closing**

The bad news hit in April 1996. Through a series of mergers in the quickly consolidating poultry industry, the family-owned Louis Rich turkey processing plant in West Liberty, Iowa, had become a subsidiary of Kraft foods, owned by Philip Morris. Kraft reviewed its holdings and determined two poultry plants were operating at half of their capacity. To increase efficiency, one plant would shut down and one would gear up to full capacity. One plant was in South Carolina, the other in West Liberty, Iowa. The supply of turkeys in Iowa came from many individual producers with medium-size operations. In South Carolina, consolidation of the poultry industry was already well underway. Within miles of the plant, one or two contract growers could expand to meet the new demand. Even though the West Liberty processing plant had a stable, highly trained workforce that manufactured consistently high-quality products, the disperse supply was seen as a limiting factor to full-scale production. The decision was made to close the West Liberty plant in six months.

### **Decisions to Make**

Iowa turkey growers were faced with the loss of their biggest and best market if the processing plant in West Liberty closed. In addition, a feed mill in Ellsworth, Iowa, used by many of the growers and owned by Kraft, would close, negatively affecting the input side of turkey production. The West Liberty plant processed about half of the seven million turkeys produced in Iowa in 1996. Iowa turkey producers grew birds under several different arrangements, some on contract, some independently. The plant closing would affect every producer, as the local supply would far outstrip the processing capacity of the other two poultry plants in Iowa.

One of the top growers, an influential agri-businessman from Story City, Iowa, sold half of the 200,000 turkeys he produced annually to the West Liberty plant and half to another Iowa plant, BilMar (Sara Lee Corporation). To this grower, the idea of buying the plant was not appealing. He had been down that road before. In 1975, he and several other growers had purchased a plant in Storm Lake, Iowa, when it was in danger of closing. Two years later, that plant closed and the producers involved lost millions of dollars. The pain of that failure was still evident in early discussions of what to do about the imminent closing of the West Liberty plant.

**Table 1. Turkeys: Number Raised 1998-1999**

<i>State</i>	<i>Number (1,000 head)</i>		<i>1999 as Percent of 1998</i>
	<i>1998</i>	<i>1999</i>	
North Carolina	50,000	48,500	97
Minnesota	44,500	43,500	98
Arkansas	28,000	27,000	96
Virginia	26,000	25,000	96
Missouri	22,000	22,000	100
California	19,000	18,000	95
Indiana	13,500	13,500	100
Pennsylvania	10,500	10,100	96
South Carolina	10,600	8,500	80
Iowa	7,000	7,500	107
Other States	54,104	51,286	95
<b>U.S. Total</b>	<b>*285,204</b>	<b>274,886</b>	<b>96</b>

*\* Estimate Source: Agricultural Statistics Board, NASS, USDA.*

*Source:* National Turkey Federation Web site: <[www.eatturkey.com](http://www.eatturkey.com)>.

This grower was fairly confident he could find markets for his birds even if the plant closed. He was a top producer, with many ties in the industry. On the other hand, philosophically, he was farming not only for himself, but also for the generation before and after him. He was concerned about the loss of this plant in terms of how it would shrink the Iowa turkey industry. He thought about the \$60 million per year the turkey producers were pumping into Iowa's sagging rural economy. As president of the National Turkey Federation, he considered the industry as a whole and the direction it was heading. Turning it over in his head many times, only one answer seemed to work. In May, when the producers filed papers of incorporation, he was with them. An opinion leader in the state and industry, his decision to join was crucial to the viability of forming the co-op.

### **Iowa Turkey Growers Cooperative**

The growers examined every conceivable business structure and chose to form as a New Generation Value-Added Cooperative. Farmland, the largest farmer-owned open co-op in the United States, had met with the producers in April 1996. They had an interest in helping the turkey producers form a co-op to buy the packing plant and feed mill so that they could then lease the plant and market the products. Those talks eventually failed, but it had opened up discussion about forming a co-op. A new Iowa law had just gone into effect that allowed producers to form "New Generation," "Value-Added," or closed co-ops. These "501" co-ops allowed producers to own processing facilities and to add value to their farm-produced commodities. In a sense, it allows farmers to participate in vertical integration along with the rest

of the industry, securing profits beyond the farm gate. This type of co-op allows the number of investors to be limited, protecting their initial, often substantial investment. The producers knew very little about this structure, as only one other such co-op existed in Iowa, but saw that it offered a possible way to keep the turkey industry in Iowa.

## **Technical Assistance**

Jeff Jobe, Cooperative Development Specialist for USDA, held informational meetings and discussed strategies with the producers. He talked to the group about the financial incentives available to businesses forming under the co-op structure. He provided examples of similar farmer-owned co-ops in Minnesota and North Dakota, where producers process their own durum wheat, sugar beets, corn, and other commodities. After studying existing New Generation Co-ops and exploring state and federal programs, the turkey growers determined that a co-op structure provided the best opportunity to obtain loans, grants, and loan guarantees.

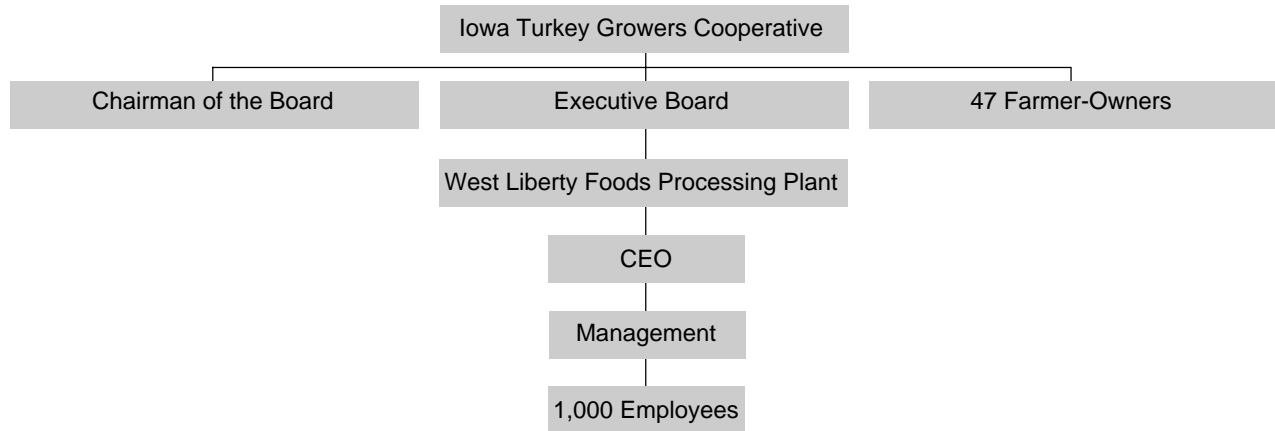
Time was a critical factor. Kraft had announced that the plant would close in December 1996, which didn't leave much time for discussion. As talks progressed, Farmland bowed out of the negotiations. Kraft/Oscar Mayer offered to contract 50 percent of the production for the first year and 25 percent for the second year. This offer went a long way in reducing the risk of investment.

The director of the Hamilton County economic development group (a former Sara Lee Corporation executive) provided important leadership during this period. He played a significant role in the complex negotiations between the producers, Farmland, and Kraft/Oscar Mayer. A market feasibility study by a Cedar Rapids, Iowa, consulting firm, showed that there was the possibility of making a profit as long as the commodity price for raw product remained around \$1.90/lb. Having a dedicated, stable, and trained workforce still in place was a definite plus, as was the plant's West Liberty central location near rail and interstate.

With strong leadership from the top producers, details on the co-op structure were discussed, incorporation papers were filed, and the Iowa Turkey Growers Cooperative board was formed. Public perception of the co-op's potential to succeed was enhanced by a significant level of positive press coverage, along with stories about the plight of the turkey growers. The group of producers maintained solid working relationships with the media and with public officials, a key ingredient in setting the stage for financial support from public agencies. A financial package was assembled in record time. Within three weeks, the package came together from state, federal, and private sources, along with cash investments by the producers.

The entire package included \$16.2 million in authorized capital, divided among more than 16 million shares held by 45 individuals representing 47 enterprises. Each share also gave the co-op members the right (and obligation) to deliver a certain number of birds to the plant. These "delivery right" agreements also signified to lenders and public agencies the depth of the producers' willingness to stand behind the plant once the co-op took ownership.

**Figure 1. Organizational Chart**



## Financial Package

Anchored by \$2.4 million in cash equity put up by co-op members, Iowa's Department of Economic Development (IDED) approved a \$900,000 grant and loan package through the state's legislatively funded Value-Added Agricultural Products and Processes Financial Assistance Program (VAPPFAP). IDIED also approved \$875,000 in forgivable loans through its Economic Set-Aside Program, using the city of West Liberty and Muscatine County as sponsors. To qualify for this program, the co-op agreed to pay 425 workers at the processing plant an average wage of \$9.66 per hour.

The Iowa Corn Promotion Board granted the co-op a \$50,000 low interest loan, Muscatine County loaned \$50,000, and the city of West Liberty loaned \$75,000. Additional dollars came from the Iowa Farm Bureau Federation, with a \$1.25 million loan, and a grant for \$15,000 came from the Iowa Turkey Federation. Norwest Agricultural Credit loaned \$8 million, and USDA's Rural Development guaranteed 70 percent of an additional \$7 million from Norwest. Heavily invested and leveraged, the turkey growers understood that there was no turning back.

## Management Team

The co-op knew that excellent and experienced management would be critical to the success of the venture. One of the producers put in a call to a trusted and respected veteran of the food processing industry, a manager of a turkey production and processing facility in California. They had served together a few years earlier on the National Turkey Federation board. The manager wasn't looking for a new position, but he answered the call to come to Iowa to meet with members of the newly formed Iowa Turkey Growers Cooperative. He was impressed by the group and by what they had accomplished in a short period of time. His relationship to the producer, plus his family ties to the Midwest clinched the deal. By November, he was on board as president and chief operating officer, putting his management team into place. The arrival of a successful, respected CEO lent credibility to the fledgling co-op.

The co-op by-laws were written with continuity in mind, building stability into the board. The new CEO worked with the executive committee, four dedicated producers that would be involved in every detail of the planning for operations at the processing plant. He insisted that each member of the elected board of directors have a fax machine so that they could stay in constant contact. Communication was established as the cornerstone of the relationship between the CEO and the board, with faxes and weekly conference calls or meetings in addition to monthly board meetings. Despite rumblings in the industry that predicted oversupply and too much production capacity, the newly formed co-op was optimistic.

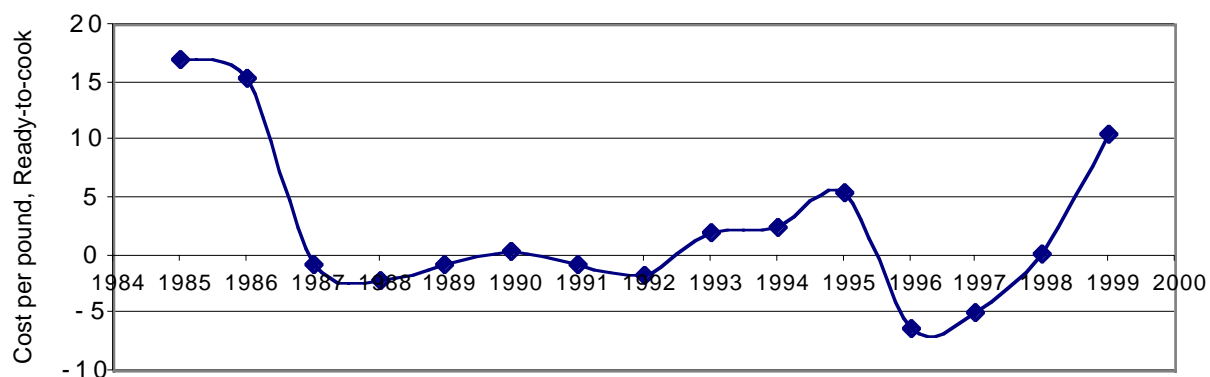
### West Liberty Foods

The co-op took ownership of the plant on December 27, 1996, and the plant opened under the new name “West Liberty Foods” on January 13, 1997. The town of West Liberty breathed a sigh of relief, for the town had long depended on the processing plant for economic stability. The 250,000 square foot processing facility and large parking lot sits on the south edge of West Liberty’s downtown, and the community of 3,000 depends on the annual payroll of more than \$20 million in wages and benefits, and the millions of dollars collected in taxes. The CEO assembled an impressive management team, including two other well-known individuals in the turkey industry as Chief Financial Officer and Vice President of Sales and Marketing. A five-year strategy was formed, and the plant opened for business.

### Market Downturn

Disaster struck just as the new management team assembled at West Liberty Foods. Commodity prices began to head downward. A market correction due to oversupply of turkeys sent prices tumbling throughout the winter and into spring. The producers’ co-op and management team watched helplessly as the prices fell. In the turkey industry, the CEO faced a hostile attitude at national meetings, as much of the industry believed it would have been better to shut the plant down. By May 1998, commodity prices were at historic lows of \$1.07/lb.

**Figure 2. Estimated Net Returns for Whole Turkey at Wholesale**



Source: National Turkey Federation, *Sourcebook*.

Even when prices were at their lowest, the co-op members held together, going back to their membership several times for infusions of cash. They renegotiated bank contracts, put together an exit strategy just in case, and waited for prices to come up. Rather than blame new management for their predicament, the members supported the plant management through words of encouragement. Many ideas on how to turn the business around were discussed. The theme between management and board members at this time was “We will strive to survive.”

The price change came just in time. In July 1998, the market turned upward and the demand improved. By then, the co-op was running very efficiently. The growers had examined their production methods and facilities and became as efficient as possible. They had trusted their CEO and management team through the downturn, understanding that market forces and their position in the market were to blame. By August they were coming out on the other side, and they were ready to carve out a niche in the new marketplace.

## **Industry Leader**

West Liberty Foods is now an industry leader in value-added food production. While medium-sized in terms of capacity, the management strategy puts it on the cutting edge in the “New Economy.” In the New Economy, transnational corporations do not want to own real estate or take on the risks of managing a workforce. They prefer to contract with well-managed small processors that are flexible and efficient. West Liberty Foods has positioned their company in this niche.

The co-manufacturing strategy has paid off. West Liberty Foods currently co-manufactures for many of the easily recognizable meat and poultry labels, and they are no longer tied to commodity pricing structures. They have moved up the food chain to the highest value markets, where they can make best use of their strengths. In this market segment, building strong relationships with the buyers and maintaining the highest quality is more important than having the lowest price.

In addition to co-manufacturing for branded labels, West Liberty Foods also manufactures upper-end private labels for grocery chains and a line of deli meats for the restaurant trade. Another niche that is now coming into focus but was not originally predicted is processing products for food companies that were once considered competitors.

A recent expansion opens even more doors of opportunity via a big investment in food safety. The new addition totally separates the “raw” workforce from the “cooked” workforce. Each workforce has separate facilities, and individuals are not allowed to mingle, eliminating the spread of any contamination from the raw meat to the cooked products. It is a step towards the future, putting the West Liberty plant on the cutting edge of food safety.

The next step is developing an in-house label to brand high-value retail products. As high-end consumer markets continue to grow, opportunities abound for food processors with infrastructure to develop and manufacture innovative meat products. West Liberty Foods has the added advantage of a core supply of identity preserved birds and the ability to control their supply. They also purchase additional raw turkey, beef, pork, and chicken from producers in surrounding states.

**Table 2. 1998 Per Capita Consumption in Pounds**

Chicken	72.6
Beef	68.1
Pork	52.6
Turkey	18.1
Lamb and Mutton	1.0

*Source:* National Turkey Federation Web site: <[www.eatturkey.com](http://www.eatturkey.com)>.

Today, the 250,000 square foot West Liberty plant employs 1,200 people, with an average seniority of seven years, far higher than the industry average. West Liberty Foods has grown from \$60 million to \$130 million in sales in three years. Planned improvements include a new slicing and packaging area, new internal cold storage, and a \$500,000 planned management information system. The company is in the process of purchasing an additional plant in Sigourney, Iowa, which will employ an additional 200-250 people. West Liberty Foods was recognized in November 2000 for its contributions to value-added agriculture by the Iowa Area Development Group (IADG), an economic development agency formed by Iowa's rural electric co-ops and municipal electric utilities. IADG presents the Venture Award to recognize businesses that provide leadership, capital investment, and jobs for rural Iowa communities. The company was also a finalist for the 2000 Governor's Iowa Industry Awards.

### **West Liberty Foods Mission Statement**

The corporate mission reflects the producer/owners' goals of being good corporate citizens along with achieving economic success:

- To improve the economic conditions of our grower/owners through processes which add value to their basic product.
- To efficiently market products both domestically and internationally.
- To produce product which meets customer expectations for quality.
- To provide superior service in production and delivery of products.
- To operate under the highest ethical standards.
- To provide a safe, secure, and viable workplace for our associates.
- To operate with concern for the environment and natural resource conservation.

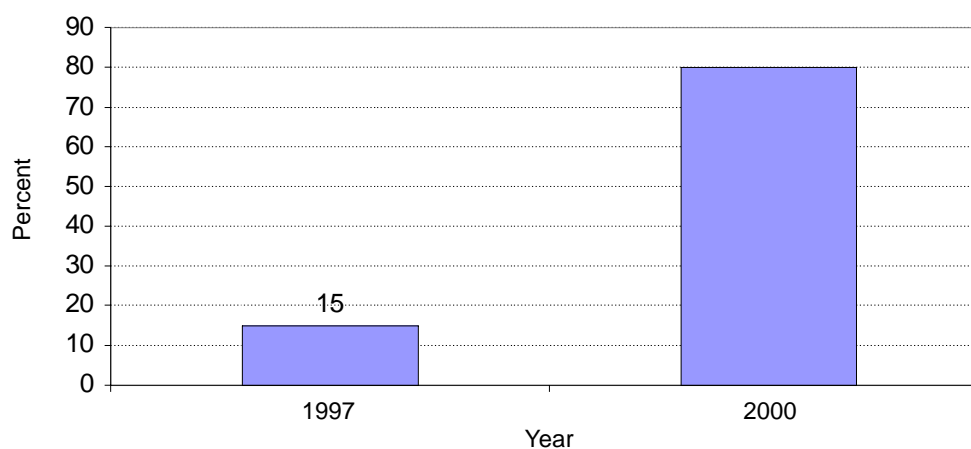
West Liberty Foods' CEO believes that the company has made progress in each area of the mission statement, and that continuous improvement is one of the main measures of success.

### **Products**

West Liberty Foods slaughters only turkeys; it purchases additional raw supplies for its chicken, beef, and pork products. The company purchases 20 percent more raw product than the Iowa Turkey Growers Cooperative delivers.

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**Figure 3. Percent of Value-Added Products Delivered to Customers**



*Source:* Personal interview with CEO of West Liberty Foods

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Eighty percent of the turkey, chicken, beef, and pork shipped out of the plant in 2000 was a fully cooked, value-added product, retailing for an average of \$8.00/lb. West Liberty Foods has aligned with the largest deli sandwich retailer, providing high-quality ready-to-eat deli meats throughout the nation.

Some of the turkey products that are marketed under the West Liberty label include the following:

- Oven roasted skinless turkey breast (3 pieces)
- Oven roasted skin-on turkey breast (3 pieces)
- Oven roasted turkey breast (5-7 pieces)
- Oven roasted turkey (multi-piece)
- Value breast/petite
- Mesquite smoked (5-7 breasts)
- Mesquite smoked turkey breast
- Hickory smoked breast
- Honey mesquite smoked breast
- Honey pepper smoked breast
- Smoked white turkey, tavern shape
- Turkey breast roast
- Rotisserie ready breast

## Highlights of a Successful New Generation Cooperative

Looking back on a business that has struggled and prevailed provides insight on successful strategies that can be passed on to others. Seven conditions contributed to the success of this co-op.

First, *the members were totally committed to the success of the co-op*. Members knew when entering into the venture that their very livelihood as farmers depended upon the success of the co-op. They had leveraged part of their farming operations by joining, and they would do whatever it took to make it succeed. Second, *there has been no change in leadership on the board* since the beginning. The directors of the board also have remained in place, allowing plant management to have consistent leadership through the tough times as well as the good times. The co-op members believe while they are still a relatively new operation is not the time to rotate officers on the board.

Third, *the best management team possible was hired and given time to develop a business strategy*. As past president of the National Turkey Federation, the CEO had the network experience to connect West Liberty Foods with the right people. As past president of two different turkey-processing companies, he also had the experience to run West Liberty Foods. The Vice-President of Sales and Marketing was hired as an experienced marketing leader from a growing food company. The past experience of these and other management team members have helped to carry this fledgling plant into a market leader.

Fourth, *the co-op members had the ability to withstand a low price cycle of their finished products*. Taking over ownership of a processing plant during a low price cycle was both a curse and a blessing. The curse was that the co-op barely survived, but the blessing is that the turkey growers learned to raise turkeys more efficiently, and to trust each other.

Fifth, *the plant had a well-trained and experienced workforce already in place*. In order to prove to customers that they could produce a quality product on a consistent basis, the plant needed the skill of every employee in the plant. This skill was transferred to the customer in the form of trust. The employees are dedicated to producing the highest quality product in the industry.

Sixth, *there was open and constant communication between management and board members*. Management dealt with their fear of failure by constantly communicating with all principles of the organization, including the lenders and USDA officials.

Seventh, *there was good timing in the marketplace*. The low price “drought” changed the structure of the turkey processing industry. Two other plants in the U.S. either closed or changed to processing something other than turkey. Once the low prices turned around, it was soon evident that there was not enough turkey processing plants in the U.S. to supply all of the demand; therefore, customers were willing to inquire and sign contracts with West Liberty Foods.

## Strategy of a Successful Processing Business

The business within the co-op must have a marketing plan that will take the processing plant from a “new kid on the block” status to an established, well-respected business. The management of West Liberty Foods developed the strategy listed below before taking over the plant. Currently, they are in their fourth year of a five-year marketing plan.

- *Become a co-manufacturer of high-end products—not commodity products.* West Liberty Foods would always hear the cry of “lower prices for my product” as long as they sold into the commodity market. They determined from the start that if their customers were selling product at very high prices, then the customer was less likely to request product at lower and lower prices.
- *Process products for the upper-end private label brands.* Major grocery chains now brand meats with their own label. They want only the highest quality meats to represent their label. Again, this is targeting high-end products for their customers.
- *Develop a market for the product before beginning processing.* Even if it means hiring a co-manufacturer prior to a plant going on line, a demand must be developed for the product. Developing markets for the product is more important than building the plant.
- *Discover niches in the market and develop a product line for this niche.* Through market research, West Liberty Foods has discovered market niches. Soon the company will produce products for those niche markets.
- *Align with nationally advertised retail shops and become their major supplier.* Often retail shops demand a continuous supply of high-quality product. They also prefer long-lasting relationships.
- *Produce more than one product to keep the customers loyal.* The marketing department of West Liberty Foods has discovered that to keep customers loyal, they must provide other types of meat besides turkey; therefore, the company also provides beef, pork, and chicken products to their customers.

## Model for the Future

The Iowa Turkey Growers Cooperative and West Liberty Foods are a model for the new agriculture that will lead the Midwest to rural prosperity. West Liberty Foods is positioned to capture a significant percentage of the high-end specialty meat market, capitalizing on Iowa’s strengths: a well-developed transportation infrastructure, a well-trained workforce, rich natural resources, and abundant grain. Ultimately, value-added agriculture adds prosperity that will be shared among all of the producer/owners, and, in turn, it will be shared throughout the hometowns of the producers (See Table 3. Time Line on following page).

**Table 3. Time Line**

<i>Processing Plant</i>	<i>Year</i>	<i>Cooperative</i>
Louis Rich Sr. moves plant to West Liberty, Iowa	1943	
Plant is converted to chicken processing	1946	
Plant concentrates on turkeys	1949	
Plant is renamed Louis Rich	1960	
Louis Rich announces closing	May 1996	Turkey producers deal with possible loss of market
	July 1996	Iowa turkey growers form co-op
	Fall 1996	Members hire management and contribute capital
	Dec. 1996	Co-op takes over ownership of plant and names it West Liberty Foods
West Liberty Foods begins processing	Jan. 1997	Co-op employs 424 people
15 percent of end product was cooked or considered value-added; \$60 million made in sales	1997	Members must reinvest into cooperative
Management draws up plans to dissolve the processing plant due to unprofitable business; Lowest prices ever for turkey breast meat	May 1998	
Prices turn upward and demand increases for their products	July 1998	
	1999	Members have first full profitable year
New building is dedicated to increase product safety	July 2000	
Over 80 percent of end product was cooked or considered value-added; \$160 million in sales	2000	Co-op employs over 1,000 people
Plant is running near capacity	Fall 2000	Members consider expanding operation

*Sources:* Curry and Holmes 2001.

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## Sunrise Energy Cooperative

*by Rodney J. Fink*

*Abstract: Sunshine Energy Cooperative (SEC) is a farmer-owned co-op formed to add value to its members' commodities. The planned plant capacity is six million gallons of ethanol prepared from the purchase of approximately two million bushels of corn. Total by-products produced at maximum capacity are 40,000 tons of stillage and 5,000 tons of carbon dioxide (SEC 2000). The co-op was formed on May 30, 1995 (date of incorporation) and started operation on November 25, 1999. Operations through August 31, 1999, consisted primarily of raising capital, obtaining additional debt and grant financing, designing and constructing the ethanol grain processing facility, and performing administrative functions. The co-ops voting membership is 228, and approximately 600 producers have corn delivery rights to the plant.*

### Background Information

Sunrise Energy Cooperative (SEC) (2000a) is located in Benton County in east-central Iowa, south of Blainstown, a community of approximately 672 people and approximately 290 families. Blainstown is west of Cedar Rapids, in a productive farming region close to the Amana Colonies and 84 miles east of the Iowa state capital of Des Moines. The parent organization for SEC is the Iowa Beef Cooperative. The original plan for the co-op was to operate an integrated business that included the ethanol plant and a beef feedlot, which would use the stillage by-product of the ethanol plant. Because of complications with the regulations regarding co-ops, two separate co-ops were formed, including the SEC (ethanol plant) and the Sunrise Benton Eastern Iowa Farm Feeders (BEIFF). Both co-ops are adjacent to each other and share office space, scales, and other facilities.

SEC contracted with the Iowa Department of Natural Resources to develop an economic feasibility study, computer model, and business plan for a hypothetical energy-producing farm. The information was designed to be a transferable resource for other producers and is available from the Iowa Department of Natural Resources (*Iowa Value-Added Resource Manual* 2000). The hypothetical integrated energy farm comprises a variety of farming components that complement and sustain each other.

An ethanol plant is the hub of the integrated energy farm, and it produces ethanol, heat, carbon dioxide, and animal feed. The heat is to be used in an aquaculture facility for raising commercial fish such as Tilapia. The carbon dioxide could be furnished to a commercial greenhouse, and the high protein feed is fed to cattle. Methane could be captured from the anaerobic digestion of cattle manure and used as a supplemental source of energy for ethanol

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The author would like to acknowledge the assistance of Greg Behounek (accountant), Steve Thompson (shareholder), and other SEC employees. Their assistance is gratefully appreciated.

production. Digested manure can be sold or used on site to fertilize corn or cellulose feedstock for ethanol production.

The integrated energy farm analysis model produced by SEC is a decisionmaking tool that allows users to input financial data regarding corn to ethanol production, cattle feedlot operation, manure digestion and methane recovery, and aquaculture and greenhouse ventures. The model is a Microsoft Excel file called “Analysis Model for an Ethanol Plant” and is available on the Iowa Department of Natural Resources Web site or as part of the *Iowa Value-Added Resource Manual* (2000). A model for a 40-million gallons per year plant is also available.

SEC currently has an ethanol plant, corn production (by member-owners), and a cattle feedlot (a separate facility owned and operated by BEIFF). They plan to implement the aquaculture module within the next three years. The aquaculture facility, constructed at the site, may use waste heat captured from the ethanol plant to maintain the incoming water temperature at a level sufficient for fish production. Wastewater from fish production has a potential planned use for greenhouse plants.

The plan for the ethanol plant is to take delivery of most of the corn needed for the year at harvest time. High moisture corn is delivered and stored in a large bunker for use as needed throughout the year. By buying most of the grain at harvest time, farmers can sell their corn without the expense of drying and on-farm storage. Most grain comes from local growers, which minimizes transportation costs. Corn used in ethanol production may contain up to 32 percent moisture and could save producers up to \$40 per acre in drying costs. The high moisture corn is stored in a large bunker adjacent to the ethanol plant and is loaded for processing as needed. The ethanol is sold through Heartland Fuel and Grain of Aberdeen, South Dakota. Stillage is sold wet to the adjoining feedlot (BEIFF) and to other feeders in the region. Carbon dioxide, another by-product of an ethanol plant, is not utilized at this time as the output from a plant of this size is usually not sufficient to justify processing.

## **Ethanol Industry Overview**

Currently there are 57 producing ethanol production facilities in the United States with several others under construction (*Iowa Value-Added Resource Manual* 2000). Total production is slightly more than 1.8 billion gallons per year and total direct employment is more than 4,000 full-time employees, plus thousands of indirect jobs which are created by the ethanol industry. The production capacity of plants varies from fewer than one million gallons per year to more than 100 million gallons per year. The SEC plant capacity of less than six million gallons per year places it in the category of a small plant.

The primary uses of ethanol is as an octane extender for gasoline, as a clean air additive in the form of an oxygenate, and as an aid in the reduction of America’s dependence on imported oil (*Iowa Value-Added Resource Manual* 2000). To accomplish and encourage the use of ethanol by the petroleum industry, Congress established an incentive in the form of a tax credit during the mid-1970s. The tax incentive continues today and was recently extended to 2007. The \$0.054 per gallon tax credit is an exemption from the Federal Gasoline Excise Tax paid by gasoline

marketers. This allows them to provide a cleaner burning gasoline with a higher octane to customers and to reduce their tax liability in the process.

As clean air standards continue to tighten, ethanol gains a greater market share of the gasoline market. Ethanol's primary competitor is Methyl Tertiary Butyl Ether (MTBE), and recent discoveries of groundwater contamination from MTBE have spurred greater interest in ethanol blends. Ethanol is a fully biodegradable product and stands ready to fill the void left when, and if, MTBE is banned. Congress recognized the economic value of ethanol when blended at a 10 percent level with gasoline. Ten percent ethanol-blending boosts the octane rating of gasoline by an average of three points. Ethanol, a renewable energy, is energy efficient. Every 100 BTU of energy used to produce ethanol (energy use includes planting, cultivating, harvesting, and processing) returns 135 BTU of ethanol. By comparison, for every 100 BTU of energy used to produce a gallon of gasoline returns only 85 BTU of gasoline or 55 BTU of MTBE. Ethanol lowers harmful carbon monoxide emissions by 30 percent and reduces carbon dioxide emissions by 27 percent. The Environmental Protection Agency credits reformulated gasoline containing ethanol with the reduction and control of hazardous emissions which threaten air quality in many cities (Balderson 1999).

In 1990, Congress adopted regulations that would increase the manufacture and use of alternatively fueled vehicles. Through the use of these low-emission vehicles, ethanol has an opportunity to meet the demands of these cars for fuel. Ford and Chrysler produced several hundred E85 vehicles in 1999, which can use 85 percent ethanol and 15 percent gasoline. The challenge for the ethanol industry is to provide sufficient refueling sites to accommodate these cars, which require very little modification from the standard vehicle (so little that there is no price increase for the E85 vehicle).

Other uses are beginning to evolve for ethanol and the coproducts associated with its production. Stationary and mobile fuel cells powered by ethanol are beginning to emerge, and ethanol is gaining popularity as a road and power-line deicer.

### **Corn for Ethanol Production**

Corn components can be found in thousands of products—adhesives, cosmetics, food, and paper, to name just a few. Approximately 61 percent of 1998 corn use was for livestock feed (*Missouri Farm Facts, Corn* n.d.), 18 percent for export, and 6 percent each for ethanol and high fructose products (all other uses were 9 percent). Ethanol, which is produced from corn, is a clean burning, domestic renewable fuel that reduces demand for foreign oil and provides a market for more than 600 million bushels of corn annually. For every 100 million bushels of corn used for production of ethanol, corn prices may increase from four to eight cents per bushel (*Missouri Farm Facts*, n.d.; NCGA 1999). According to the National Corn Growers Association (NCGA) (1999), corn-based ethanol results in a 50 to 60 percent reduction in fossil energy use and a 35 to 46 percent reduction in greenhouse gases. They credit ethanol with reducing the demand for foreign oil by 100,000 barrels a day.

Corn varieties differ in amount and types of starch, and the local Pioneer Hybrid (Pioneer and DuPont Specialty Grains) representatives have helped some farmer-members select high-

yielding hybrids with high amounts of extractable starch. In addition, the stockpile of wet corn at SEC is treated with an inoculant to help control the heat and the pH so that the starch content is not lost (“With a Little Help from Some Friends” 1999). With better quality grain going into the plant, the amount of ethanol produced per bushel of corn may be higher.

One bushel of corn (56 pounds) will produce about 2.7 gallons of ethanol and 16 pounds of distillers dried grains with solubles (DDGS). The residual product of distillation is whole stillage, a mixture containing 10 percent solids from the grain and 90 percent water. For every 5,000 bushels of grain ground, approximately 192,000 gallons of whole stillage is produced. Although whole stillage is an excellent cattle feed, most plants (including SEC) further process the stillage to an easier-to-manage product. DDGS is produced when the condensed distillers solubles (CDS) are returned to the centrifuge to be mixed with the distillers wet grains (DDG). This is the most common and highest volume form of feed derived from a dry mill ethanol facility.

Although SEC is a dry mill operation, they market their stillage as distillers wet grains (DWG) and as a thin stillage called CDS. DWG leaves the centrifuge at 55 to 65 percent moisture and makes excellent cattle feed (drying DWG may slightly damage the protein of the feed) (*Iowa Value-Added Resource Manual* 2000). SEC leaves a higher level of moisture in the DWG and sells a product with about 75 percent moisture (NCGA 1999). Thin stillage, or CDS, contains 2 to 5 percent dry matter as “fines” that escape screening or centrifuging. The composition of CDS varies according to the process technology of the plant, but usually contains between 5 and 10 percent proteins, fiber, fats, and oils. CDS may be sold to nearby livestock and dairy farmers, and once farmers become educated about the nutritional value and convenient handling, it often becomes the feed supplement of choice.

BEIFF currently has about 2,600 cattle on feed and uses about 10 percent of the plant’s DDGs. The feedlot is being enlarged to house 5,000 cattle and will use about 20 percent of the DDGs produced by the plant. The remainders of the DDGs are sold within a 60-mile radius to livestock producers (members have first priority on DDGs’ sales). Directly east of the plant site, a private company is developing a large dairy cow complex (reportedly for 2,600 dairy cows), which potentially will be a good source for marketing DDGs.

## **Plant History and Management**

The idea for the integrated ethanol plant came from a videotape of an integrated operation in Garden City, Kansas. Members of the original task force visited Reeves Agri-Energy in Garden City and were impressed with the integrated ethanol plant, aquaculture (Tilapia production unit), and feedlot. The Reeve’s ethanol plant produces 10 million gallons per year output and has served as a model for the unit planned in Blirstown.

The Iowa Beef Cooperative is the parent organization, and the general manager of the co-op spent much of his time from 1992 until the present working to develop and promote the project. The first shares were sold to farmer-members in December 1995 when the first of approximately 100 informational meetings was held for potential shareholders. To purchase shares, one had to be a member of the Iowa Beef Cooperative or the Iowa Producers Cooperative (grain co-op).

Until late 1998, the general manager of the Beef Cooperative directed the activities of the co-op and remains firmly committed and involved at present. SEC hired a manager in December 1998 who directed the operation through July 2000. A new manager is being hired at the present time. The co-op has entered into an agreement with a local community college for the reimbursement of certain employee training costs (2000a).

SEC was originally designed as an integrated co-op (ethanol plant, feedlot, aquaculture, etc.); however, in order to receive a USDA loan guarantee, the operations had to stand alone. Therefore, a separate general manager was employed for each entity (ethanol plant and feedlot), and each operation is independent. The general manager of the Sunrise Energy Feedlot also manages the Iowa Beef Cooperative. The two co-ops (Sunrise Energy Ethanol and Sunrise Energy Beef) work together and share an office and other common space. The original general contractor for the plant and the co-op had differences during the construction phase which delayed the plant completion.

On October 27, 1999, the co-op received a Demand for Arbitration from the general contractor responsible for the construction of the ethanol facility, alleging that the co-op failed to timely and completely pay the general contractor for work performed on the facility (SEC 2000a). The Demand for distribution called for more than \$900,000 for work performed, or to have been performed, on the facility. The co-op alleges that the general contractor did not complete the facility in a timely manner and believes that the co-op is owed liquidated damages due to delay on the completion of the facility. In June 2000, a court awarded a judgment of \$675,000 plus interest to the general contractor.

The issue of contract management of an ethanol plant has often been a prerequisite to some Process Design Companies (PDCs) who take equity interest positions in new ethanol facilities. By taking an equity position, the PDC is often able to interject needed capital into the project to help make it a reality. In addition, financial institutions often have a greater comfort level with the financing of the project if the company building the plant is also an investor (this is often true with USDA guaranteed loans). Typically, the PDC will want a management contract for an extended period of up to three to five years, and they are usually renewed automatically unless a written objection from the board is received at least one year prior to the sunset of the contract. Some boards do not like this arrangement, and others feel it helps ensure a profitable operation. Some boards are forced to accept such arrangements because of funding shortfalls.

When a PDC becomes a part of the operation, it is often necessary to create a Limited Liability Company (LLC) with the co-op as the majority shareholder. In Iowa and some other states, financing from a co-op bank cannot be obtained unless farmer ownership is at least 80 percent.

SEC didn't choose to employ a PDC for management as they felt they had the expertise to manage the plant properly without the added expense. The ideal position for a co-op such as SEC is as follows (*Iowa Value-Added Resource Manual* 2000):

- Most or all of the equity is raised, and the farmer-members provide the crop.
- Co-op members do not commit a “risky” percentage of the crops they are capable of raising.
- Farmer-members hold a large majority of the voting stock and control the board.
- Board members are skilled and committed to their role of serving the interests of the farmer-members.
- The board does not try to manage the plant but, rather, hires a manager who, in most cases, has ethanol experience and then gives him or her authority to do the job, while having him or her remain accountable to the board.
- Fiscal and financial matters, including profitability, investment, and distribution of dividends, are under the oversight and control of the board.

The SEC board has eight members who meet frequently to make decisions on managing the plant. They often meet every other week but hope to only have to meet monthly soon. Board members have donated much time, effort, and expertise to the operation and currently receive no pay for their efforts. The operation of the ethanol plant is coordinated with the needs of the Sunrise BEIFF co-op in meeting BEIFF’s needs for stillage.

### **Stock Categories and Ownership**

Several share categories exist within SEC. The share categories were designed to meet different categories of people participating in the co-op, including several farm organizations and promoters:

- *Class A Shares of Preferred Stock* – Sold initially for a par value of \$5,000, these shares gave a producer the right to deliver 4,500 bushels of high-moisture corn to the co-op. Some Class A Shares are not owned by farmers but, instead, are owned by other investors who sell delivery rights to farmers. According to the auditors’ report, 551.5 shares have been sold, with a value of \$2,757,500. These are nondividend bearing shares and provide delivery rights for grain to the ethanol plant (SEC 2000a). Delivery rights may be sold, and a person can own Class A Shares without being a voting member. Currently, about 600 people own delivery rights at an average value of approximately \$5,000 each.
- *Class B Voting Stock* – To own voting stock, one must be a member of the Iowa Beef Cooperative or the Iowa Producers Cooperative. The Class B Voting Stock has a par value of \$1 and is designed to keep the voting of the co-op in the hands of the farmer-members.
- *Class C Preferred Stock* – The stock (\$250,000) is held by the Iowa Farm Bureau and should receive dividends at the annual rate of 7 percent of the par value, payable annually on the 31<sup>st</sup> day of March. The Iowa Farm Bureau has been supportive throughout the life of SEC.

- *Class D Preferred Stock* – Heartland Grain Fuels of Aberdeen, South Dakota holds a \$200,000 share value of Class D Preferred Stock (Heartland Grain and Fuels have a 2.5 year marketing agreement with SEC) and accrues annual cash dividends at the rate of 7 percent of the par value, payable on the 31<sup>st</sup> day of March.
- *Class E Shares* – Class E Shares are issued when the SEC cannot pay farmers for grain and when the farmers who delivered the grain desire payment. In this situation, Class E Shares are issued, which are a pledge for payment to a farmer and the Iowa Farm Bureau. Farmers issued Class E Shares may borrow money from the Iowa Farm Bureau at 7.5 percent interest until the SEC makes payment for the grain. This category of stock was issued when the company was ordered to stop accepting loads of corn by the Iowa Grain Licensing Bureau (Shareholders Resolve Dispute at Ethanol Plant 1999). State statutes require grain dealers to store grain whole until the debt is paid. SEC had offered its producers contracts calling for a deferred payment of their grain and had started to crack corn before some of the contracts were signed (SEC 2000). The seller of grain can elect to make a deferred sale and select a later pricing and payment date, or corn can be priced on delivery at the previous days Chicago Board of Trade (CBOT) futures closing price. Dividends are not ordinarily paid on any Class E Shares issued, although some dividend paying Class E Shares may be provided to organizations such as the Iowa Farm Bureau who may help finance the recent indebtedness from the arbitration judgment.

### **Patronage Distributions**

The patronage distribution plan is for the board of directors to allocate the co-op's cash savings at the end of each fiscal year among the following items: (1) a reasonable reserve for depreciation, bad debts, contingent losses, and contingent expenses; (2) retained savings to the extent deemed necessary by the board of directors based on an evaluation of the future needs of the co-op and the competitive position of the co-op, as defined in the co-op's bylaws; and (3) distributions to the farmer-members in proportion to the amount of corn the co-op has purchased from the farmer-member, up to the amount specified in the respective farmer-member's letter of marketing intent. Distribution to farmer-members will be issued in the form of either cash or Class B Voting Stock. Any issuance of Class B Voting Stock will conform with the requirements of the Internal Revenue Code, section 1388(d), as a nonqualified written notice of allocation.

### **Financing Activities**

The SEC is financed by farmer-members' share funds, a loan, grants, and TIFF funds. A breakout of the financing activities from the audit report through August 31, 1999 follows (SEC 2000a).

**Table 1. Cash Flows from Financing Activities**

Borrowing on long-term debt	\$5,706,000
Issuance of Class A Preferred Stock	\$2,773,723
Issuance of Class C Preferred Stock	\$250,000
Issuance of Class D Preferred Stock	\$200,000
Receipt of state grants for property, plant, and equipment	\$279,000
<b>Net cash flows from financing activities</b>	<b>\$9,208,723</b>

*Source: Iowa Value-Added Resource Manual 2000.*

According to the audit report (SEC 2000a), as of January 31, 2000, the co-op had incurred a net loss of more than \$600,000 (unaudited) and the co-op's liabilities exceeded current assets by almost \$900,000. Also, as of January 31, 2000, the co-op had drawn all amounts available under the revolving loan payable and long-term debt. The above calculations do not include the judgement from arbitration with the general contractor that awarded the general contractor \$675,000 plus interest in June 2000. The co-op depends on generating sufficient cash flows to meet its obligations, and it plans to accomplish these objectives in the following ways (but not limited to these):

- Renegotiate the existing revolving loan payable and term loan payable which would enable the co-op to lower its monthly debt payment requirements and obtain an increase in the availability allowed under the revolving loan payable.
- Obtain additional financing from the Iowa Department of Economic Development.
- Obtain additional production efficiencies. The co-op has hired an additional employee with more than 20 years of ethanol production experience to generate additional production from the inputs used and current operational design.

The co-op has succeeded in getting financial assistance in the past. It received a grant from the Iowa Department of Natural Resources for \$50,000 to prepare a business plan. The Iowa Department of Economic Development provided funding of \$900,000 of which \$180,000 was a grant and the remaining \$720,000 was a no-interest loan. In addition, in November 1999, a loan of \$1 million was obtained from the Iowa Department of Economic Development to cover operating costs to pay for delivered corn.

The second loan is to be repaid beginning in September 2000 at the rate of \$.08 per bushel processed. If the co-op cannot make the payment, the loan may be deferred. The delay in construction caused by the conflict between the SEC and the general contractor protracted the construction phase and necessitated downsizing the plant and raising additional equity. The recent judgment of \$675,000 plus interest is another financial concern of the co-op and the board is currently working to find solutions for this problem. The major expense in ethanol production is the purchase of corn for fermentation, and the major source of profit is from the sale of ethanol. The current and projected price of corn is low, and ethanol is currently selling at levels

above projections. July 2000 prices of approximately \$1.40 per gallon of ethanol combined with current projected corn prices should produce a positive cash flow for the co-op.

### **Site Characteristics**

Factors to consider in selecting a site for an ethanol plant are similar to those for other industrial plants. *Good location* criteria encompass factors such as good drainage, sufficient road and rail access, utility availability, and adequate on-site space to allow ease in movement of trucks and equipment. Expansion possibilities must also be considered, along with road access, rail access, and acreage requirements. The SEC site is not close to a major highway or rail line; however, due to the design capacity of approximately six million gallons, the site may be adequate for the plant and to truck the ethanol to the delivery points. If the plant had a larger capacity (say 15,000,000 gallons per year or more), the presence of a rail line and spur would have been very important. Much of the stillage is used on-site or locally. Also, the ethanol is trucked to users through a brokering arrangement with Heartland Fuel and Grain, and the arrangement seems to work well.

*Water supply* is important to the operation of an ethanol plant because about seven gallons are required to process a bushel of corn. Much of the water required in an ethanol plant is recycled back into the process; however, there are certain areas where fresh water is needed (probably around 12,500,000 gallons or more per year). Wastewater treatment is important; however, since much of the water can be recycled back into the process, the effluent is minimized. This has the long-term effect of lowering wastewater treatment costs. Today, many new plants are at or near zero effluent facilities. The water in the cooling tower and the boiler blow-down water can be stored in a pond and eventually released to the environment. Water supply for the operation appears to be adequate. SEC recycles much of its water (it has adequate water from a rural water district and a well) and requires only about 800 gallons per day to operate.

*Fuel* for the plant is important even though significant improvements have been made to reduce the energy intensiveness of ethanol production. Currently, about 45,000 BTU of energy is required to produce a gallon of ethanol, which contains 76,000 BTU of energy. Fifteen years ago, as much as 65,000 BTU of energy was required. SEC representatives have reported an efficiency of 50 percent (*Iowa Value-Added Resource Manual* 2000). Natural gas is the preferred fuel for an ethanol plant, and SEC is located near a natural gas pipeline. Propane gas serves as a backup but is generally 50 to 70 percent higher than natural gas. Both natural gas and electricity costs have exceeded earlier projections, even though a gas line goes through the property and the co-op received a good electric rate from the energy company.

### **Projected Operations**

The plant has yet to complete its first year of operation (the first grain was delivered on September 7, 1999, and production started on November 25, 1999), so operating and profit information is not available. The production cost projections from the *Iowa Value-Added Resource Manual* (2000) provide a useful cash flow summary for the SEC's ethanol unit.

**Table 2. Cash Flow Summary**

<i>Production</i>	<i>Quantity</i>	<i>Unit Price (\$)</i>	<i>Annual Operations (\$)</i>	<i>Pct. of Total</i>
Denatured ethanol	\$5,263,160	1.07/ gal	5,631,581	77.1
Carbon Dioxide	11,799 tons	5.00/ ton	59,000	0.9
DDGS	15,566 (dry)	103.40	1,609,590	22.0
<b>Production Income</b>			7,300,171	100.0
<i>Production</i>	<i>Quantity</i>	<i>Unit Price (\$)</i>	<i>Annual Operations (\$)</i>	<i>Pct. of Total</i>
Grain	0.37740 bu/gallon	\$1.80/ bu	\$3,396,600	60.6
Chemicals, enzymes, denaturants, yeast, etc.			\$409, 530	7.3
Steam	25 lb per gal./ethanol	\$2.98/ 1,000 lb	\$372,040	6.6
Electricity	2.251 kw-hrs/ gal	0.0372/ kw-hr	\$418,690	7.5
<b>Total Variable Costs</b>			\$4,596,860	82
<i>Fixed Costs</i>			<i>Annual Operations (\$)</i>	<i>Pct. of Total</i>
Payroll and Burden			\$375,980	6.7
Maintenance			\$219,250	3.9
Other costs (Ins., misc.)			\$415,770	7.5
<b>Total Fixed Costs</b>			<b>\$1,011,000</b>	<b>18</b>
<b>Fixed + Variable Costs</b>			<b>\$5,607,860</b>	<b>100</b>
<b>Production Income—Fixed and Variable Costs</b>			<b>\$1, 692,2311</b>	
Projected facility cost			\$8,769,996	

*Source: Iowa Value-Added Resource Manual 2000.*

## Debt Reduction

The audit report shows that the co-op's current liabilities exceed current assets by almost \$900,000 (unaudited) as of January 31, 2000. This does not include the recent arbitration judgment by the general contractor of \$675,000 plus interest. The ethanol plant balance sheet projected a long term debt of \$4,337,836 at the end of the first year of operation (Iowa Department of Natural Resources Web site n.d.; *Iowa Value-Added Resource Manual 2000*). It appears that the long-term debt is longer, and the cash flow to service the debt load is of concern.

According to the audit, the USDA-guaranteed loan is for \$4,986,000, with interest accruing daily and payable monthly at a rate equal to the *Wall Street Journal's* prime rate plus 1 percent. Principal is payable in equal consecutive monthly installments commencing 15 months after the completion of the ethanol facility. Repayment of 70 percent of the loan balance has been guaranteed by the U.S. Department of Agriculture. In addition, there is a subordinated loan to the Iowa Department of Economic Development and a second loan made on November 8, 1999, for an additional \$1,000,000 from the Iowa Department of Economic Development. The latter loan is non-interest bearing for a term of five years, with monthly principal payments beginning on September 1, 2000, at the rate of \$0.08 per bushel of processed corn during the previous month,

estimated at approximately \$13,000. The loan is collateralized by the general business assets of the co-op and personal guarantees by the members of the co-op's board of directors (personal guarantees limited to a maximum of \$500,000).

### **Start-up Operations**

Delivery of high moisture corn to SEC, Iowa's first farmer-owned ethanol plant, began in September 1999 (*Ethanol Promotion* n.d.). The processing of ethanol commenced on November 25, 1999. Subscribers were happy with the idea of harvesting their corn at a high moisture level (22 to 30 percent) and avoiding the drying cost. Taking in more than two million bushels of high moisture corn, however, was more of a problem than anticipated because the unloading and grinding of the corn slowed the process considerably. Reports of truckers waiting in line for hours to unload grain made those delivering grain unhappy. The co-op has located a high energy roller-crusher that will process 20,000 bushels per hour (versus 6,000 bu/hour last year), but the recent arbitration ruling has put that expenditure on hold for the time being. For the coming delivery season, deliveries may need to be of dry corn, or those delivering grain may have to pay a processing fee if they bring in high moisture corn.

When the Iowa Grain Licensing Bureau ordered SEC to stop accepting corn, the SEC voting members resolved the situation by changing the enterprise from 499 Cooperative Association (grain dealer) to a 501 Closed Cooperative. The 501 cooperative arrangement allows the SEC to store grain and defer payments as well as use the corn for ethanol production ("Shareholders Resolve Dispute at Ethanol Plant" 1999). The issue was reported as an administrative problem tied to whether grain is worth more processed or unprocessed. Under the new rules, the co-op continues to buy grain only from those who own delivery rights.

### **Economic Impact**

The impact on the region is positive because 20 jobs have been created by the ethanol plant and additional jobs are being created by the Sunrise BEIFF co-op. The addition of an adjacent dairy facility will also create economic growth for the region as will a proposed aquaculture unit. According to the Iowa Department of Natural Resources (energy bureau), the SEC is benefiting about 300 farmers from the five million or more million gallons of ethanol produced there each year. In addition, the operation generates \$8 million of economic activity (*Ethanol Promotion* n.d.). The marketing of the ethanol is handled by Heartland Grain and Fuels, which has a 2.5 year marketing agreement at a 2.5 percent commission. The ethanol is priced daily and paid to the co-op on a weekly basis, which is considered a good arrangement by SEC. Heartland Fuel and Grain is a consortium of ethanol plants, and the consortium sells about 30 million gallons of ethanol per year. Farmer-members are projected to receive \$3 per bushel for their corn ("Sunrise Energy Taking Deliveries" 1999).

### **Summary and Lessons Learned**

SEC began operation in the fall of 1999. The idea for the plant started when a group of growers from eastern Iowa saw a videotape about an ethanol plant in Garden City, Kansas (Reeves Agri-Energy, a 10 million gallons per year ethanol plant). The Kansas plant centerpiece

was the ethanol plant but also included were an integrated beef feedlot and aquaculture operation. SEC processes more than two million bushels of wet corn each year, and the corn is provided by about 600 owners of corn delivery rights who will make their deliveries in the fall. One major promoter for SEC was the general manager of the Iowa Beef Cooperative, and his endless efforts, with the help of other farmer promoters and the support of the co-op, made the plant a reality.

The concept of the integrated plant is to provide producers a way to make a profit by processing their grain into ethanol. In addition, the product left over after the starch is removed to make ethanol is called stillage and is used for animal feed. About one of every four bushels of corn that goes into the ethanol plant comes back as animal feed and is sold to area beef feeders and milk producers. The presence of a feedlot on the plant site is a ready market for a major portion of this feed, and the proximity of the plant and feedlot eliminates the cost of transportation. The implementation of an integrated system, such as SEC, can serve as a model for other producer groups interested in creating new facilities. Also, the lessons learned (some of them difficult lessons) can help other groups in their planning.

SEC experienced some problems with its organizational planning. This was apparent when the Iowa Grain Licensing Bureau ordered SEC to stop accepting loads of corn in fall 1999. The situation was resolved, but it created a temporary problem for the co-op and those farmer-members delivering grain to the plant. SEC did not choose to utilize a PDC for its management, and it had a dispute with its general contractor which recently resulted in a judgment against the co-op. Because of the arbitration ruling, the delay in construction brought about by the dispute, and other early production problems associated with management, the cost of construction per bushel processed appears to be high. The total construction and start-up cost is more than \$2 per gallon of ethanol produced, which is high when compared to some other recent ethanol plants either completed or under construction such as, Golden Triangle and Northeast Missouri Grain Processors who had construction and start-up costs of less than \$1.50 per gallon processed. These plants are larger (15 million gallons per year) and both employed an experienced PDC for the construction phase and for plant management. In both cases, the PDC made a substantial investment in the plant which helped with the financing.

The Iowa Department of Natural Resources has provided support for the project and initiated a project to develop an economic feasibility study, computer model, and business plan for a hypothetical energy-producing farm.

SEC served as the general contractor for this project. Likewise, the Iowa Department of Economic Development provided much needed funding as difficult times evolved in the pre- and early operational stages of the project.

Based on the auditors' report (Redmond, Broghammer & Jonas, P.C.), the deficit accumulated during the development stage and current liabilities exceed current assets by \$900,000 (as of January 31, 2000) (SEC 2000a). In addition, recent arbitration awarded a significant judgment to the general contractor at the expense of SEC. Based on these financial shortfalls, additional funding or financing is needed to sustain operations and pay the short-term

and long-term debt. The cash flow to meet the long-term debt payment is a concern that the board of directors is continuously addressing.

The co-op has been responsive to problems as they evolve and generally has found satisfactory solutions. The problem of handling the delivery of more than two million bushels of wet corn in early fall will exist when the corn is delivered in fall 2000, and plans to handle this problem are being considered. The support of the Iowa Department of Economic Development in providing funding to support the issuance of Class E Shares when the co-op status was changed is evidence of the working relationship between the co-op and state agencies.

It is a major undertaking for a group of producers to create an operation of this magnitude. They have learned from mistakes made and have developed a model that could be useful for other producer groups. The integrated concept is a unique approach and one with the potential for assisting producer groups to benefit from value-added profits to their commodities.

Many lessons, such as the following, are learned from the creation of an operation such as the SEC:

- There must be a vision and desire to generate a new program for adding profit to agricultural commodities.
- Promoters must learn and understand the steps in forming an organization that conforms to local and state laws and still protects the basic concept of the proposed organization (in this case, an integrated energy farm).
- Promoters must be ready to hire professional help (e.g., management help) as needed to have the proper skills for running such an operation.
- Creating an accurate business plan that can be used in acquiring capital is a necessity. In addition, if the project is not financed adequately, major problems at start-up will be faced.
- Promoters must consider selecting a PDC for the construction phase and possibly the initial management phase. Selecting the proper general contractor is of utmost importance.
- The product flow from producer to plant must be visualized so as to avoid unnecessary handling difficulties.
- Networking with other co-ops to share information and to work together to add value to farmers' commodities is a good idea. If possible, join with other farmer-owned co-ops in joint efforts (such as marketing) which provide mutual benefit.

Developing a new business such as the SEC requires the dedication of members who want the operation to succeed. This is certainly true of this co-op as the work of fundraising, organization, construction, and management were made possible because of the dedication of members of the Iowa Beef Cooperative, loyal promoters, and a board of directors who wanted to turn their vision into a reality.

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## **21<sup>st</sup> Century Alliance: Building Value-Added Agribusiness**

*by Roger Brown*

### **Introduction**

To create a successful business in an unfamiliar industry is difficult. Likewise, changing a cultural environment from one of independence to one of interdependence is also a challenge. It might seem impossible to create a new business in an unfamiliar industry that requires a large group of independent-minded investors to work cooperatively for success, yet it can be done and is being done.

This case study examines the 21<sup>st</sup> Century Alliance and how it has helped farmers, mainly in Kansas, increase the scale of their operations through value-added agribusiness. In just three years of operation, the Alliance has led to the formation of six New Generation Cooperatives (NGCs) and one Limited Liability Company (LLC). It is also worth noting that the NGCs include relatively diverse agriculture products. The Alliance, at its core, is made up of a relatively small number of dedicated people working diligently to extend the value chain for farmers, also known as Ag Producers, and, as a result, to improve rural economies. It is best described as an entrepreneurial agribusiness organization that is both focused and flexible in its business start-up activity.

The Alliance focuses on identifying the critical issues in a new venture and resolving those issues to ensure that a new business has a reasonable chance of succeeding. Addressing issues to improve the business is an ongoing process. Those projects that fall short during the feasibility process are scrapped. Flexibility is demonstrated by an openness to considering unique approaches to making a business work such as growing product in one state and processing it in another. The key is whether the business can achieve its ultimate financial objective for the membership.

### **Background**

The 21<sup>st</sup> Century Alliance organization is headquartered in Manhattan, Kansas—a location that is roughly at the center of America’s “breadbasket.” Kansas is proud of its farming heritage. According to the Kansas Department of Commerce and Housing, more than 90 percent of the state’s land is used in agriculture, and the industry pumps \$10 billion into the state’s economy. It usually ranks number one or two nationally in wheat acreage harvested, wheat yield per acre, total production, and total value of wheat crop harvested. In 1998, farmers in Kansas produced 495 million bushels of wheat, representing 19.4 percent of the total U.S. wheat production (U.S. Census Bureau 1999, 688). Even so, this success cannot hide the fact that agriculture in Kansas

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This case study was prepared with the assistance of Chris Williams, Vice President of Operations for the 21<sup>st</sup> Century Alliance. Any observations and opinions presented in this report are those of the author.

has undergone profound changes in the last two decades. The farm crisis in the 1980s stressed the farms in Kansas and neighboring states. The struggle continues and can be seen in the continued decline in the number of farms between 1992 through 1997 (Table 1). The difficulty in earning a living by farming has resulted in farm consolidations and a shift to additional employment outside the farm.

**Table 1. Farms and Principal Occupation**

<i>Kansas</i>	<i>1992</i>	<i>1997</i>
Number of Farms	63,278	61,593
Principal Occupation of Farm Operators		
Farming	39,324	34,979
Other	23,954	26,614

*Source:* USDA, National Agriculture Statistical Service

The advent of value-added agriculture has required a shift in the mindset of American farmers. In the early history of the United States, farmers were interdependent, relying on each other to harvest, butcher, and even entertain. Gradually, they became independent through the advances of technology. With each purchase of new and better equipment, the American farmer became more independent to the point that even large families were no longer necessary to run the operation. The technology brought efficiencies and higher productivity that allowed for the creation of a culture of independence among the farming community, but it also created bumper crops that affected price.

To counteract the oversupply and price vulnerability, the government provided support to the farmers. This created a level of dependence on the government but allowing farmers to remain independent in the farming operation. The loss of government support and continuing low prices has resulted in the need for a new equilibrium in the farm community. This need has resulted in the recreation of interdependence in rural communities as farmers seek to capture the value of the finished goods that are produced and marketed from their low priced commodities. This move back to interdependence is not easy because it not only requires an uncomfortable level of collaboration and sharing but it also may require staggering levels of capital and technical knowhow that are not available. The business model created by 21<sup>st</sup> Century Alliance facilitates the creation of interdependency and the attainment of resources necessary for farmers to own processing and or marketing operations related to their raw commodities.

The 21<sup>st</sup> Century Alliance was formed to identify new opportunities for farmers so that they could control some of the risk and volatility of their farm operations and become more profitable in the process (Williams and Merrett 2000). The Alliance has approximately 650 members, and its role is one of an entrepreneurial institution supporting farmers in their effort to start new agricultural related business. It is steadfast in its role of assurance that the new business be sound and of acceptable risk. A process is followed to build ideas into viable ventures. Ideas that cannot be supported with producer commitment, acceptable risk, sufficient capital, and qualified management are rejected.

## **The Formation**

The formation of the Alliance and its initial operation are best described by Merrett and Williams (2000) in *A Cooperative Approach to Local Economic Development*. They detail how in 1995, as a result of the Kansas Association of Wheat Growers and the Kansas Corn Growers Association, the 21<sup>st</sup> Century Alliance was formed to raise venture capital. The purpose of the capital was for the purchase of processing facilities, product development, and marketing studies. The goal was to raise \$1 million by recruiting 2,000 ag producers and requiring each to pay \$500 to become members of the Alliance. The recruitment of members was not limited to Kansas farmers but included neighboring states as well. Although the target of 2,000 members was not reached, the organization was ready to seek business opportunities at a subscription of just fewer than 600.

By 1997, the patient search for the right opportunity yielded a flour mill in Rincon, New Mexico. The 21<sup>st</sup> Century Grain Processing Cooperative (GPC) was formed to own and operate the mill. The mill had failed under previous ownership due to a lack of quality wheat in the area. Under new ownership by the GPC, high-quality wheat would be shipped by rail from Kansas, Oklahoma, and Texas. The location of the mill made it ideal for marketing product to cities like Albuquerque, El Paso, and to the population in Mexico.

In order to purchase the mill, a stock sale was initiated to raise \$5 million. A producer could participate by investing \$5,000 in a share that included an obligation to deliver 2,850 bushels of wheat. Approximately 375 Alliance members invested a total of \$3.2 million in the venture. This was enough equity capital to allow for the purchase and renovation of the mill and so by June of 1998 the mill began operation under GPC ownership. Thus, the 21<sup>st</sup> Century Alliance's first value-added agribusiness had been launched.

## **Continued Success**

As of January 2001, the Alliance has established six value-added enterprises of which four process agricultural products. The two other processing enterprises are still in some stage of development. They have also established a grain-merchandising group. All four of the processing entities in operation are NGCs, but the grain-merchandising group was organized as an LLC. The NGCs include one grain mill, one dry bean processing facility, and two dairy operations (Table 2).

**Table 2. Organizations Created by the 21<sup>st</sup> Century Alliance**

<i>Name</i>	<i>Location</i>	<i>First Production</i>	<i>Organ.</i>	<i>Product</i>	<i>Members</i>	<i>States Represented</i>
21 <sup>st</sup> Century Grain Processing Cooperative	Rincon, NM	June '98	NGC	Flour mill	360	KS, NE, OK, PA, TX, CO
21 <sup>st</sup> Century Bean Processing Cooperative	Sharon Springs, KS	Fall '99	NGC	Dry edible beans	50	KS, CO, NE
21 <sup>st</sup> Century Dairies Cooperative: Washington County	Linn, KS	March '99	NGC	Milk	96	KS
21 <sup>st</sup> Century Dairies Cooperative: Ladder Creek	Tribune, KS	Dec. '99	NGC	Milk	101	KS, IL, CO, NE
21 <sup>st</sup> Century Ag Fiber Procurement Cooperative		Under review	NGC	Fiberboard	120	KS
21 <sup>st</sup> Century Grain Merchandising, LLC	Manhattan, KS	July '00	LLC	Grain Merchandising	3	KS
Great Plains Corn Processing Cooperative	Plains, KS	Development stage	NGC	Corn Masa Mill	82	KS

*Source:* 21<sup>st</sup> Century Alliance.

## Grain Processing

Sales in the year 2000 were \$5 million. The market for the mill's wheat flour continues to build and, with it, the cash flow is increasing. The mill currently produces 17 truckloads of flour per week compared with three trucks per week in 1998. Thus, the business is growing and it appears to have a bright future. Even as management recognizes the burden of interest payments on loans as an obstacle. These loans were needed to create the business; however, servicing this debt expense has severely affected cash flow. Now, as sales grow, the ability to service debt has improved. An additional stock sale was considered at one time in order to replace debt with equity and, thus, reduce interest payments. No stock sale is planned at this time, probably due to the increased revenue from the business.

## Dairies

The two dairies were developed simultaneously but are located in different regions of the state. The first Alliance dairy facility to start production was the 21<sup>st</sup> Century Dairies Cooperative: Washington County. This is a 1,500 cow facility with 100 participating producers. The other dairy, 21<sup>st</sup> Century Dairies Cooperative: Ladder Creek, began production in December

1999, just 10 months after the Washington County facility. Remarkably, from the initiation of the stock sale for the Ladder Creek Dairy to first production took only 11 months. More than \$2 million in equity was raised from 100 investors. The Ladder Creek facility milks approximately 2,500 cows.

This is a difficult economic time for dairies throughout the country, and the two Alliance dairies have had to cope with low milk prices. In order to cope and compete, costs must be reduced. Two major expenses are debt and feed. In both cases, the structure of an NGC allows for control of the situation by issuing additional equity to reduce debt and by reducing the cost of feed. Even though business is tough at the moment, this is a business that the Alliance likes, and, in fact, it is looking at an additional dairy opportunity.

### **Dry Beans**

The bean cooperative is the first Alliance agribusiness to provide dividends to its members, and it has been able to return most of the original investment. The 21<sup>st</sup> Century Bean Processing Cooperative is located in Sharon Springs, Kansas, but includes producers from Colorado and Kansas. This cooperative marketed 165,000 cwt. in 1998, its first year of production. The co-op is now looking to expand its marketing effort on a national scale.

## **The Alliance Organization**

The Alliance organization includes the members, a governing board, professional management and staff, and consultants as needed. Alliance membership includes ag producers from nine states, with the majority residing in the state of Kansas. The size of the membership fluctuates between approximately 650 and 750 members. Members have an opportunity to invest in each of the new businesses as it develops.

Management of the Alliance is the responsibility of the CEO, Vice President of Operations, and the Alliance Board. The board is composed of nine members with diverse backgrounds and skills but all possessing excellent credentials and leadership. In addition to extensive experience in various types of agriculture, the current board has experience in finance, marketing, and grain logistics. Board membership is for three years and is staggered in order to maintain continuity. Membership on the board is not limited to residents of Kansas; it currently includes a resident of Colorado and of Nebraska. There is a conscious effort to maintain a broad representation of skills and background on the board. As part of the selection process, a nominating committee of at least two members interviews candidates before nominating them to the full board at the annual meeting.

The CEO of the Alliance is Lynn Rundell, who also is the general manager of the 21<sup>st</sup> Century Grain Processing Cooperative that processes wheat in New Mexico for its members. The CEO leads the strategy of the organization specifically by seeking to identify and develop new opportunities and by playing a significant role in communicating the vision of the alliance to members, prospective members, ag groups in neighboring states, and industry. Chris Williams is the Vice President of Operations and has primary responsibility for the oversight of operations and for interfacing with external entities. The administrative staff includes a secretary and an

accounts manager. The Alliance shares office space with the Kansas Association of Wheat Growers.

Consultants are an important part of the organization. These consultants are retained to provide technical expertise in key business activities. Skills and extensive experience in value-added agribusiness areas such as marketing, strategic planning, food processing, business development, and trade with Mexico are available within the organization (21<sup>st</sup> Century Alliance 2001a). This and other expertise are utilized in the service agreement that is put in place to do feasibility and business planning for new businesses. This expertise is also used in improving and building businesses to become more profitable.

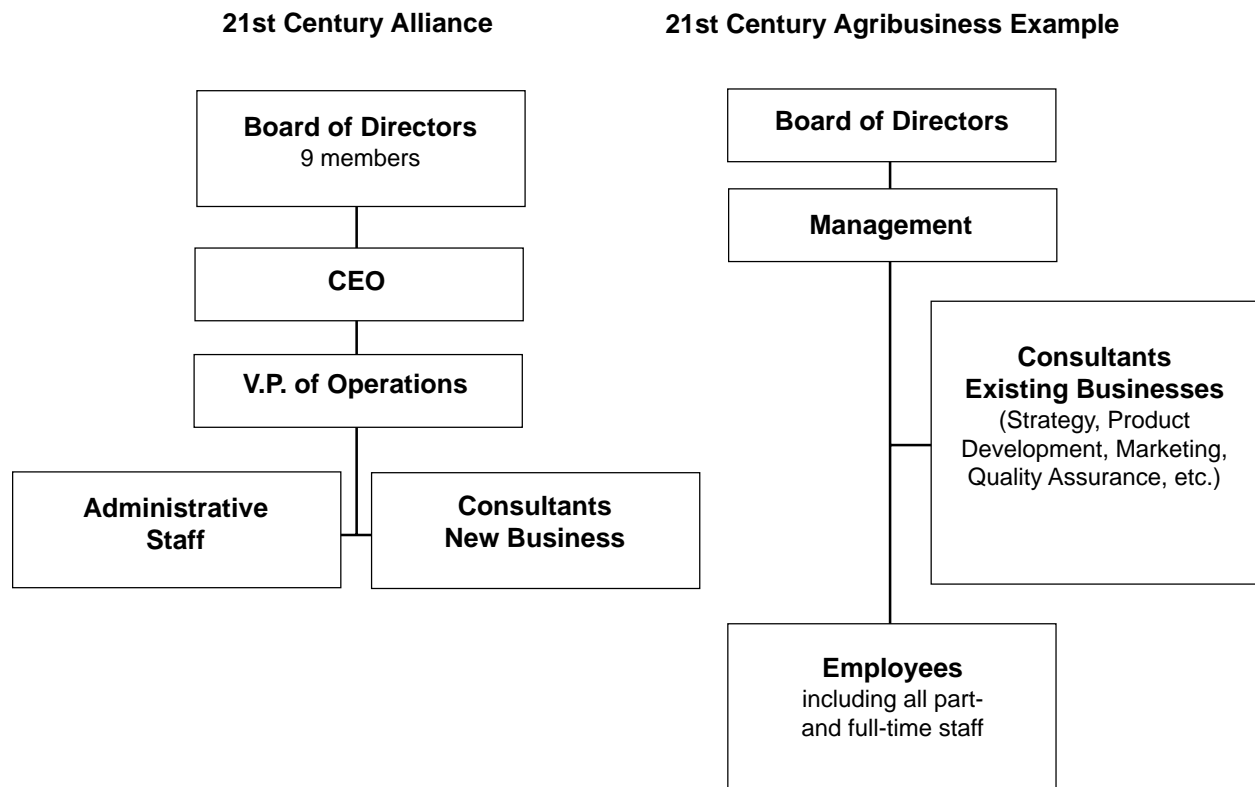
The organization's agenda includes four key elements:

1. An aggressive pursuit of new opportunities – Currently, the Alliance is actively researching four potential businesses.
2. A reduction in the risk of failure by doing the homework on the venture. A process is in place to fully investigate the merits of new ventures, recognizing that more fail to be launched than are launched. At the annual meeting it was pointed out that it is better to spend a little money up front to identify the risk than to spend a lot of money and fail.
3. The monitoring and refining of business plans of ongoing businesses – Management monitors the existing business metrics as well as the market and competition.
4. A spirit of cooperation to enhance business opportunities and promote a new approach to agribusiness – The alliance seeks business relationships across state and country borders to improve profitability.

Members pay \$100 per year, which creates an annual pool of \$70,000. The Alliance also creates revenue through a 6 percent service fee generated from the sale of stock in each new venture. These funds allow the Alliance to carry out its role as an entrepreneur which specializes in the creation of value-added agricultural businesses, specifically by providing venture capital and business start-up expertise. According to Williams, Vice President of Operations, the mission is to “provide profitable agricultural business opportunities for our members.”

The board focuses on strategic issues but remains open-minded to any opportunity presented. This is evident in the type of value-adding efforts launched to date and the apparent lack of self-imposed boundaries such as site location, type of product, and the legal organization form. The board meets when necessary to review and make decisions on ongoing projects. It also meets annually to specifically address strategy. Key questions addressed include (1) How are we doing? and (2) What should be our business focus, including the choice of industries and specific projects? In the first three years, the emphasis of these meetings dealt primarily with financial survival but, since then, the strategy is more about growing the ag economy (Williams 2000).

**Figure 1. Organization Chart**



*Source:* 21<sup>st</sup> Century Alliance.

## The Process

The process begins with an idea about a new business venture. These ideas can be top down (management) or bottom up (ag community). The overall model is that most ideas come as bottom up proposals, but, in some instances, there is a natural progression to generate new business from existing business. An example of a top down idea that surfaced was the possibility of manufacturing cheese in conjunction with the newly created dairy businesses (Williams 2000). This would be a natural value-added fit to the dairies. Due diligence was performed without the more traditional approach of first obtaining a high level of interest from investors. Flexibility is necessary in every step of the process because the best course of action is highly dependent on the situation. The key point is to ensure that the right leadership is in place prior to any idea being investigated by the Alliance. This usually requires five or six committed producers who can eventually be the core of a Board or a committee in a value-added business. Until the leadership issue is resolved, the Alliance does not spend resources on the concept.

Business concepts that receive a positive recommendation at the first presentation to the board are then investigated in more detail. A governing board is created that usually includes the ad hoc committee as its core. Articles of Incorporation are written, and the Alliance works with

the group to prepare a Development Service Contract. This Development Service Contract details the work to be done leading to start-up and the relationship with the 21<sup>st</sup> Century Alliance. The agreement covers items such as due diligence, marketing, engineering, financing, and related requirements for partnerships. The alliance will make the arrangements for all necessary activity. Consultants are used in the feasibility and start-up activities. The work performed during the due diligence phase helps define the risk and solutions to problems. For various reasons many projects do not pass this stage.

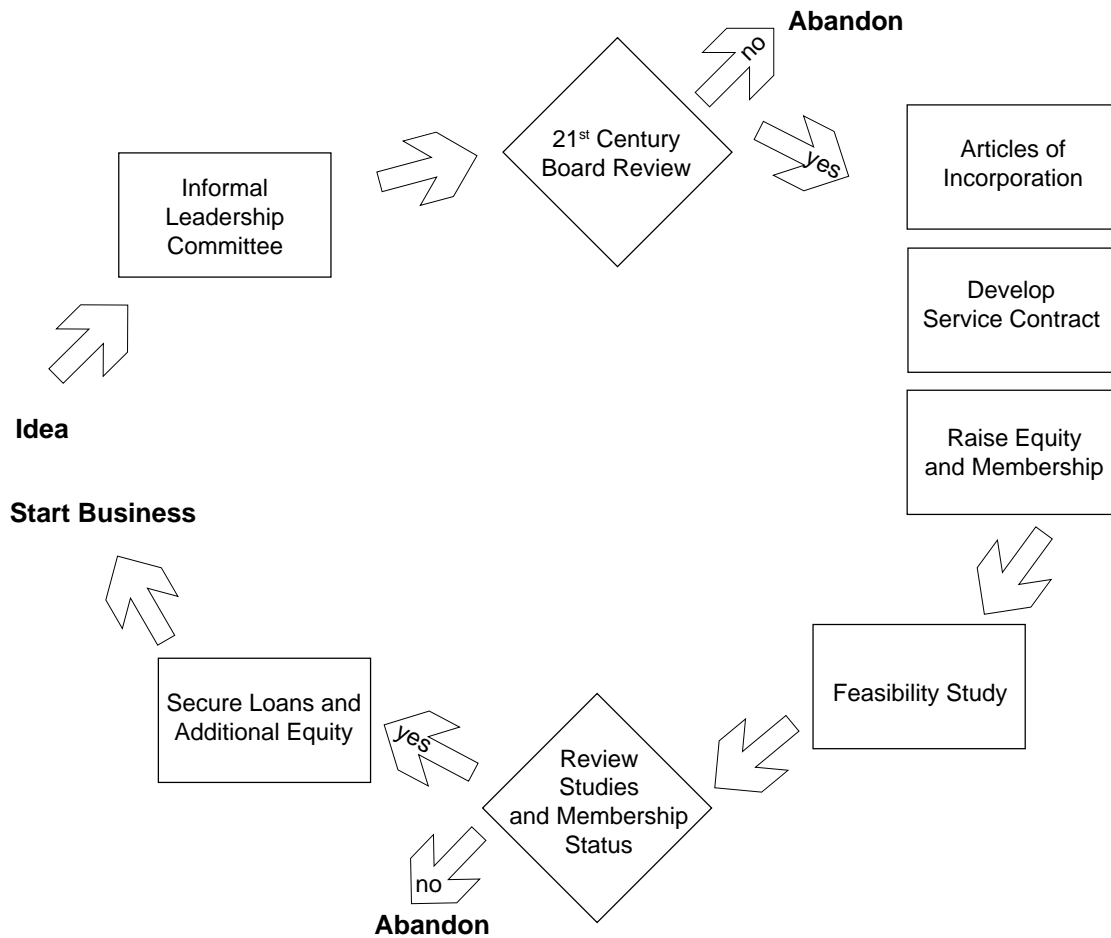
A feasibility study is then conducted to determine the probability of a successful business. If the feasibility study is positive, then the next step is to initiate the creation of a formal organization for the business. Projects that still look favorable after feasibility work move to the final hurdle of capital formation and the membership drive. Actually, the work to raise money and membership begins after the first positive review. This is because it takes a tremendous amount of time and effort to collect the necessary resources, and it is worth the risk to begin before the feasibility work is complete. The new organization, NGC or LLC, must raise equity capital to cover 40 percent of the venture.

In the final stage of the process, a contract is prepared that outlines the financial arrangement, including the type of financing and the terms of reimbursement to the Alliance. In the case of a stock sale, the Alliance will take a modest percent (6 percent) of the sale as a service fee. The service fee is the means of reimbursement for the business development activity financed by the 21<sup>st</sup> Century Alliance.

The membership drive will determine the level of commitment in terms of equity and feedstock delivery commitment. In addition to the capital raised through equity, the value-added entity will likely need to secure loans if a processing facility is required. It is important to find banks with lending experience in the type of commodity or process being developed. Clients of the Alliance look to local banks and to Farm Credit to service loan needs.

The form of incorporation depends on the circumstances of the business. If feedstock delivery is critical, then the NGC form will be most suitable. The Alliance works with one legal firm that specializes in incorporation issues for agriculture entities. This firm has a high level of interaction with the board of the newly formed, but yet to be incorporated, organization. The board and law firm jointly decide on the best legal organization form. The key point is that the project dictates the type of organizational structure.

**Figure 2. Commercialization Process**



*Source:* 21<sup>st</sup> Century Alliance.

Another very important decision is whether to buy an existing facility or build on a Greenfield site. For instance, the first venture for the Alliance involved the purchase of an existing wheat mill in New Mexico as opposed to building one in Kansas. The Alliance recognized that the struggling New Mexico mill was a victim of poor-quality wheat and, therefore, offered an opportunity for improving the quality of wheat and flour. The subsequent purchase and supply of high-quality Kansas wheat made the mill profitable. Recently, the American Institute of Baking promoted this mill as the industry flour model for others to emulate.

The dairy ventures did not have the option of buying existing facilities. This business developed from the recognition that rich forage material was available in the state for dairy cows. This recognition resulted in the construction of two new dairies because the facilities had to be near the majority of the forage material that is produced for the cows. The decisions such as

where to locate and whether to build or buy an existing facility are based on sound business principles.

### **Impact on the Community**

It is too early in the processing history to have measurable data on the impact of the new businesses in the various communities; however, the work of the 21<sup>st</sup> Century Alliance should not only help the ag producer members, but also the member's respective communities. For instance, the Ladder Creek Dairy employs approximately 30 people, most of whom live locally. The shift workers earn up to \$1,800 per month (Griekspoor 2000). According to Griekspoor, officials in the towns of Tribune and Oakley claim that the Ladder Creek facility provides local economic benefit as a result of the new money. The construction phase alone required 80 workers at a cost of \$10 million.

The advent of the NGC dairies creates a special kind of dairy by being much larger than the traditional family dairy while still being farmer owned. According to Don Reith, manager of the Washington County Dairy Cooperative, the NGC dairy improves the quality of life of the employees because the size of the operation allows employees to work normal shifts as compared with the traditional dairy farmer who works long days ("The Farmer-Rancher Paper" 2000).

### **Strategic Issues and Future Plans**

The strategic emphasis on value-added agribusiness for its membership is apparent. In addition, the geographic context of this emphasis is much broader than just the state of Kansas. The "big picture" is to build market share and product value by forming alliances with co-op entities in other states. A network of statewide alliances, similar to 21<sup>st</sup> Century Alliance, could foster value-added enterprises for respective members and also work across the alliances to share expertise, gain leverage, and, thus, increase value. Currently, the Alliance is considering the opening of an office in Nebraska to widen the exposure to value-added opportunities. In addition, the 21<sup>st</sup> Century of Michigan is being organized, which will then become a partner with the 21<sup>st</sup> Century Alliance.

The Alliance growth strategy has a strong focus on creating or acquiring businesses related to the existing portfolio as well as implementing needed changes to existing businesses to improve profitability. Three strategic initiatives can be identified:

1. Expanding commodity direct marketing opportunities

The direct marketing opportunities include increasing the market share of the dry bean industry and gaining new opportunities in grain merchandizing business.

2. Acquiring and/or building processing facilities of existing businesses

This initiative is to capitalize on the learning curve by expanding its business portfolio with businesses similar to the existing ones. For example, processing businesses being investigated include a dairy, a tortilla manufacturing company, and a corn flour milling plant.

### 3. Lengthening the value chain through forward integration

A cheese processing facility is being considered to add additional value to the dairy business. (21st Century Alliance. 2001b)

At the recent 21<sup>st</sup> Century Alliance annual meeting, an overview of external and internal considerations were reviewed in the form of a SWOT analysis. SWOT is the acronym for strengths, weaknesses, opportunities, and threats.

#### **Strengths**

Some of the strengths recognized include the fact that the farmer starts with a strong base in the value chain by controlling the land and providing the unprocessed resource, better known as a commodity, to the value chain. This strong position at the beginning of the chain, including the ability to control the quality of products, creates a logical scenario for the farmer to continue the control of each additional value-added process to the original product.

An additional strength lies in the blend of the current economic climate and the spirit of the producer. The economic climate can be summed up by failure of the system to create adequate commodity prices and by a decreasing consumer confidence in the integrity of the food supply. Starlink is just one example of a failure in product integrity. The situation creates strength for enterprising farmers and NGCs by allowing such individuals and entities to distinguish themselves from the masses and build a reputation of quality.

#### **Weaknesses**

The size of the Alliance is a hindrance to growth and overall profitability. Six to seven hundred members is not enough for the level of the Alliance's operation. This membership is the source for capital needed to increase the equity position in existing operations and for equity in new ventures. Not all members share the same desire to invest in certain businesses, so this is an added strain.

An NGC is typically regional in its resources, which can lead to a relatively narrow focus in marketing. This focus around resources has been described as a production emphasis when a customer emphasis is what is really needed. The wheat mill is an example of a situation in which the decision to open new markets has steadily improved sales and the profitability of the business.

#### **Opportunities**

The possession of land is both a strength and an opportunity for ag producers. The large corporations cannot duplicate the farmer system, so competitive opportunities exist for the local ag producer to capture niche markets. The opportunity to build business from this asset base is very clear but it requires a change in mindset from the contract production mode to a different horizon on the value chain.

## **Threats**

A key threat is the inability or unwillingness to move from independence to interdependence in value-added operations. It takes hard work, precious time, and the acceptance of a different type of risk to lengthen the value chain. Without the cooperative approach, it is likely that farmers will remain as price takers as they service contracts for various commodities.

## **Lessons Learned**

The Alliance is relatively young, but its aggressive style of working to achieve its objectives has created much experience in a short amount of time. It is constantly refining its practices to improve with each venture. Fortunately, there has not been a major breakdown in the process, and the Alliance management is comfortable with the outcome of the work to date. The number of start-ups is impressive and may relate to a philosophy of being open-minded and to the discipline of investing time and energy on the front-end of a project to define the opportunity. In other words, doing the homework. A case in point is the purchase of a New Mexico mill by Kansas's wheat farmers. The overriding objective was to add value to Kansas farmer's wheat, and the best way to do this was to own a processing mill in New Mexico and to move the wheat to the mill. The key points are to be able to define for the members the opportunity as it relates to agriculture and then the profitability of the project. If both fall short of expectations, then the wise decision is to abandon the concept and to move on to the next one.

The experience of operating new businesses has highlighted the issue of servicing debt and, in general, the issue of being undercapitalized. Owner equity has tended to make up about 30 percent of the capital as opposed to a target of 40 percent (Williams 2000). These issues have impacted the wheat mill and the dairies. Alliance management recognizes the importance of achieving an equity capital target before launching a business and intends to meet the stock sale objective on new businesses in the future (shareholder meeting).

The author notes a possible weakness in the overall entrepreneurial process of the Alliance. As mentioned earlier, the Alliance retains 6 percent of the stock sale proceeds but does not own any part of a processing facility. Its stock sale commissions are used to fund new business development; therefore, the Alliance must continually add new businesses in order to generate new funds. This may be an issue since some businesses appear to have been launched prior to achieving the stock sale target.

In conclusion, the success of the Alliance has resulted in a search for growth into new areas, both geographic and product line. The Alliance will continue to consider ventures outside the state of Kansas and to seek vertical value-added opportunities in the form of processing farm production. It also is putting more effort into horizontal value-added opportunities such as grain merchandising so that production from farms achieve maximum value. This is the age of the 21<sup>st</sup> Century Alliance.

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